The NetClean Report 2016

important insights into child sexual abuse crime

A report about child sexual abuse crime – based on a survey from 370 police officers in 26 countries.



important insights into child sexual abuse crime

FOREWORD

IT IS NOT ALL DARKNESS

In the foreword to last year's NetClean report, I wished that the content had been different - that the report was about a decrease, rather than an increase, in the number of child sexual abuse cases. I also hoped that in the NetClean Report 2016, I would be able to talk about police officers seeing a positive development, with more children being saved.

This year, we follow up on some questions from last year, as well as take an in-depth look at how child sexual abuse material is shared and distributed on the Internet, via P2P networks, social media, on work computers and the darknet. The report is also about where in the world the children in the images come from, how large the investigations really are and the challenges that law enforcement face, such as encryption and anonymisation techniques.

Unfortunately, I cannot write that the problem is decreasing the results show quite the opposite. It is a big problem and law enforcement and society face great challenges.

being more prioritised.

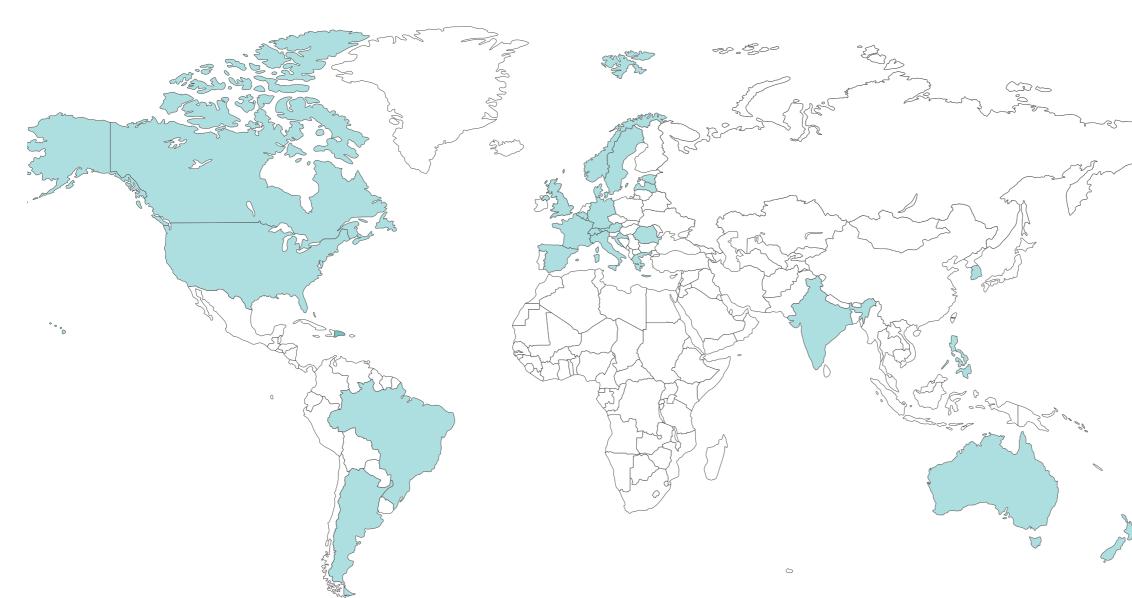
We still have a long way to go and much work to do, but these figures show that we are on the right path.

Together we make a real difference!

FREDRIK FREJME HEAD OF NETCLEAN

However, it is not all darkness, and to some extent I can actually write exactly what I wished for. An overwhelming majority of the police officers who responded to the survey said that they are better prepared to handle child sexual abuse investigations, compared to last year. Also, fewer police officers say that their workload has become more demanding. Above all, together they managed to save over 1,600 children in 2015. That is one thousand six hundred children who get another chance at a safe childhood.

Technological advancements are one reason for the improvement. More training, better resources and greater awareness of the problem in society is another. Collaboration between law enforcement agencies, public sector organisations, industry and NGO's around the world is improving and child sexual abuse crimes are



THE NETCLEAN **REPORT 2016**

The NetClean Report 2016 provides an overview of global trends in child sexual abuse crime. The report is a unique insight into the experiences and accumulated knowledge of police officers worldwide working on child sexual abuse investigations.

The aim of the survey is to create wider awareness and knowledge about child sexual abuse crime, with the long-term goal of reducing the number of cases of child sexual abuse.

The report is based on an anonymous questionnaire completed by users of Griffeye Analyze DI, an investigative tool for images and video used by law enforcement agencies worldwide.

All respondents are police officers working on child sexual exploitation cases.

Griffeye is NetClean's peer company and Griffeye Analyze DI is provided pro bono to all police forces working on child sexual abuse investigations.

The survey was carried out between 9th June and 13th September 2016. Responses were gathered through an online survey on Griffeye's user portal.

370 police officers across 26 countries participated in the survey. 61.1 per cent of the respondents come from the USA, with a further 26 per cent based in Europe.

Most of the questions in the report were asked without any suggested alternatives, or as multiple choice questions, to avoid affecting the results. This explains why the results for a number of questions add up to more than a hundred per cent.

The NetClean Report 2016 also includes blocking statistics from one Internet Service Provider (ISP). ISPs block websites that are known to contain child sexual abuse material and these lists of blocked URLs are provided by the police.

To create a better and deeper understanding of the results of the study, we also conducted interviews with a number of distinguished experts in this space.

370 respondents from 26 countries:

Argentina, Australia, Austria, Belgium, Brazil, Canada, Croatia, Denmark, Dominican Republic, Estonia, France, Germany, Greece, India, Italy, Latvia, New Zealand, Norway, Philippines, Romania, Switzerland, Spain, South Korea, Sweden, UK, USA.

Geographic distribution of respondents:

USA United Kingdom Canada Norway Sweden All others

61.1 % **8.1** % 6.5% 4.3 % 2.2 % 17.8 %

The following experts have commented on the results of the report:

Björn Sellström,

Swedish Police, National Operative Department (NOA), Swedish Cyber Crime Centre, the Child Sexual Abuse Group.

Christian Berg,

NetClean.

Jim Cole,

Special Agent and Section Chief, Victim Identification, Homeland Security Investigations, Cyber Crimes Center, Child **Exploitation Investigations** Unit USA

INTERPOL,

Crimes against Children unit, Vulnerable

Johann Hofmann, Head of Griffeye.

Jonas Lindström, Director Group Security & Business Insurance, Tele2

Kevin Lawes, Homeland Security Investigations Special Agent (retired), owner of K&S Teaching and Consulting, USA.

Michael L. Bourke, Ph.D., Chief, Behavioural Analysis Unit, United States Marshals Service.

Richard W Brown, National Association to Protect Children, Protect. org and Project Coordinator for Project VIC, USA.

Verónica Donoso. INHOPE Executive Director.





Social media is used to share child sexual abuse material



PAGE 26-27

Child sexual abuse material is found on work computers in both the private and public sector



PAGE 30-32

Increased awareness of female offenders



500,000 searches for websites showcasing child sexual abuse material every month



PAGE 28-29

Major challenges: encryption, anonymisation technologies, live-streaming and "deleters"

PAGE 33-35

Increased focus on identifying and saving children

A growing problem – but not all negative

74.6 per cent of the police officers surveyed reported that their work load has become more demanding in the last year. Only 1.1 per cent said that it has become less demanding.

The reasons for the increasing workload, according to the police officers, is primarily that the number of cases is increasing while each case contains more material from more devices. Technological developments, such as encryption, also hinders investigations and require greater resources and time investment.

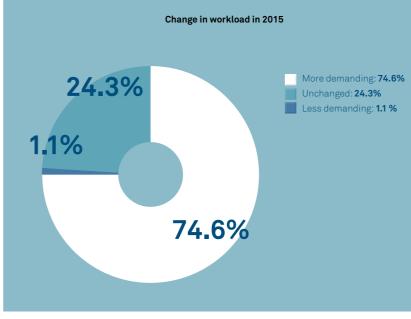
However, an increasing workload is not to be seen as entirely negative. Many police officers think that the reason for an increasing number of cases, is increasing awareness in society. More people are reporting incidents of child sexual abuse and these crimes are being more prioritised. In addition, advanced technology, more training, improved collaboration and increasing resources are contributing to the fact that police can identify more cases and have the capacity to investigate them.

Even though 74.6 per cent of police officers said that their workload is increasing, this is still a positive trend compared to last year. In the 2015 NetClean Report, 97 per cent of police officers stated that their work load had become more demanding. Overall, it is possible to be cautiously optimistic.

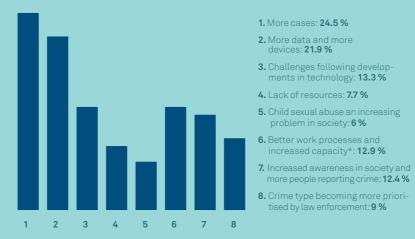
Police officers are better equipped to handle child sexual abuse investigations

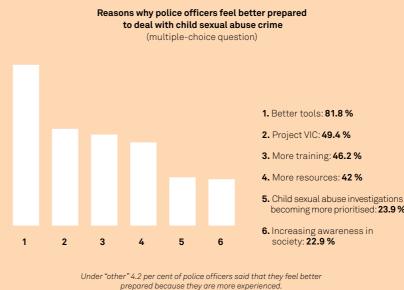
Among the police officers surveyed, 91.8 per cent said that they feel better prepared to handle child sexual abuse investigations this year, compared to the previous year.

The primary reason is better tools, but also Project VIC, more training and better resources are highlighted as reasons for an improving situation.



Reasons for work becoming more demanding





"AS A GROUP. INVESTIGATORS ARE **GETTING BETTER AT** FINDING OFFENDERS, **RESULTING IN MORE** CASES THAT NEED **TO BE WORKED.**"

*as a result of better tools, more training, more and better collaboration, increasing resources.

becoming more prioritised: 23.9 %

11

Verónica Donoso, INHOPE Executive Director.

ARE WE GETTING BETTER AT COMBATING CHILD SEXUAL ABUSE MATERIAL?

Are police experiencing an increasingly demanding work load because the volume of child sexual abuse material is actually increasing? Or is it because law enforcement and other stakeholders are getting better at finding the material? We put the question to Verónica Donoso at INHOPE, who explained that it is a complex issue with no clear answer.

At first sight, if one looks at worldwide trends, it may seem that more content (*child sexual abuse material*) is being found. However, one must be very cautious when interpreting these numbers as an increase in the amount of child sexual abuse material found does not necessarily mean that the problem is increasing. It may also mean that we are getting better at detecting this type of illegal content, because of new technologies or because of more and better human resources available to deal with it. In specific countries it may be because the population is more aware of the problem and as a result are reporting it more. What I am trying to say is that because of the nature of the content being dealt with, and the impossibility to collect data directly from the source, it is extremely difficult to draw one single conclusion. As long as we are unclear how much child sexual abuse material is being produced, distributed and consumed out there, we will not be able to know for sure whether the problem has worsened or not.

I believe, however, that the increase in awareness amongst the public, the use of new technologies (*such as the use of ICCAM by INHOPE member hotlines*) the continuous training of expert analysts and a more coordinated approach among the different actors fighting child sexual abuse material is having a positive impact in our day-to-day work. In particular, I think that international collaboration as well as increased cooperation with the industry and law enforcement agents is crucial to fight this battle. And this has certainly kept on improving through the years. Initiatives such as We Protect Global Alliance or the Virtual Global Taskforce, an international alliance of law enforcement agencies working together to prevent and deter online child abuse, are key to bringing the right people and minds together to make a real difference.

Hotlines, in their turn, play an important role in wider national and international strategies to address online child sexual abuse and exploitation. Hotlines are national focal points that allow the community to securely and anonymously report what they believe to be illicit material. Something they might otherwise feel uncomfortable or afraid to do directly to the police. Obviously, not all the content that is reported from the public is confirmed child sexual abuse material or illegal material. But this is exactly the added value of hotlines. By receiving and thoroughly analysing all these reports, including the non-illegal ones, hotlines save the police valuable time for victim and perpetrator identification and dismantling criminal networks. As a result, hotlines fill a gap that allows police to get access to information they would otherwise probably never have been able to find on their own.

In summary, even though I feel we are getting better at fighting this battle, there is still much more to be done. Many countries still lack proper legislation to address child sexual abuse material, while further efforts are needed to better investigate it, prosecute offenders, protect child victims and remove illegal online content even faster. In addition, less than a quarter of countries worldwide have a hotline today, a number that we believe must increase. It is also essential to keep working to raise awareness among the public. I believe that the key to tackling this problem is to continue increasing our efforts, to better coordinate existing initiatives and to ensure that successful ways of working are replicated and multiplied all over the world.

INHOPE

INHOPE is the global umbrella organisation uniting national internet hotlines engaged in combating online child sexual exploitation and child sexual abuse material. The mission of INHOPF is to support and enhance the work of these hotlines to strengthen international efforts to combat child sexual abuse using a multi stakeholder approach The network consists of 51 hotlines in 45 countries worldwide When members of the public come across child sexual abuse material on the Internet. they can report the suspected illegal content to the hotline in their country.

WHAT IS PROJECT VIC?

Project VIC's purpose is captured in its theme "Victims first. No child left behind", which is about shifting from offender focused investigations to victim centric investigations. Project VIC was

founded in 2011 and

is coordinated by the

National Association

to Protect Children

Protect.org. The aim

since the start has

been to provide law

enforcement with

the means - tools.

work processes and

and effectively deal

with the massive

child exploitation

VIC has grown to a global initiative with

an ecosystem of

training - to efficiently

amounts of data being

investigations, Project

Project VIC compliant

vendor tools and an on-demand quality controlled rich data

hash set via a cloud

service, spawning research and develop-

ment. Thousands

of law enforcement

VIC resulting in the

identification and

victims.

rescue of thousands of child exploitation

officials have already been trained by Project

seized as a result of

I am delighted to see that Project VIC is mentioned as one of the main reasons that investigators feel better prepared to handle child sexual abuse investigations. I would also say that in many ways better tools and more education are interlinked with Project VIC.

We've gone from working with five single agencies to over 40 countries. Since the start, Project VIC has helped save thousands of children in the United States alone, while the total number could be in the thousands more worldwide. We are seeing news stories of children being saved almost every week.

At its base, Project VIC is not a unique idea; international sharing is something that law enforcement has been, and is, trying to seek out. The difference is that Project VIC has been able to execute it in a way that makes sense to them. Through strong technology partnerships, open standards, training programmes and cloud services, even police forces that would not otherwise have the resources, and police officers who historically would not have had that role, are working to identify and save children.

At the start of Project VIC we had a vision of creating a paradigm shift from "*just*" seizing material and prosecuting offenders, to finding sophisticated ways to reduce workload and most importantly shift the focus to a victim centric approach. It took a couple of years to mature, but we are now at the point where we are delivering large amounts of data to law enforcement agencies worldwide and successfully changing the nature of investigations and legacy processes. We do this by delivering the best technologies, tools and training.

We've seen a multiplying effect in the last few years where the adoption rate of tool providers has accelerated sharply. In the beginning we needed to encourage tool providers to adopt our protocol. Now they are knocking at our door, asking how to get involved.

Simultaneously, training has played an important role in making people aware of what we can achieve by combining rich data and great tools and technologies. We've seen multiple cases where people have received training, gone back to their agencies to run through old or current cases and within hours or days saved children that would otherwise have been missed.

The more momentum we get, the better the Project can be. Our next big leap is the Project VIC Global Alert System, which is a new and innovative way to crowdsource victim identification internationally. Basically, investigators will be able to submit information and data about images to the whole Project VIC international community and the system will then send an alert if there is someone else within the community working with similar data. This is a great example of the kind of ideas that come out of Project VIC Innovation and Tech Summits and how we can swiftly transform an idea into a game changing system. The first beta version should be up and running in the first quarter next year.

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Richard W Brown,

Richard W Brown, National Association to Protect Children, Protect.org and Project Coordinator for Project VIC, USA.

PROJECT VIC - VICTIMS FIRST. NO CHILD LEFT BEHIND.

Investigations with terabytes of data and millions of images

The investigations and cases that law enforcement is dealing with continues to increase. Exactly how large they have become is difficult to say. The answers span from small cases to extremely large cases. For example, police officers specialising in forensic investigations of mobile phones may only handle a couple of hundred images at a time. Whereas those working on the largest cases will have to deal with millions of files. As a result, it is difficult to put a number on the average case load. What we can present from the answers in the survey is an indication of the case load and how large the biggest cases are.

Many police officers reported that a normal case contains somewhere between 1-3 terabytes (TB) of data, 1-10 million images and thousands of hours of video material. This refers to all the material in a seizure that officers have to sort through in order to find and investigate the child sexual abuse material.

The largest cases are considerably larger than that, even if the answers vary considerably, from one terabyte to 10, 20, 30, 40 or 65TB of material. A few police officers have answered that they've had cases as large as 100TB, over 100 million images and over 100,000 hours of video material.

"Four years ago our average seizure included 4TB of data that we needed to process to find the child sexual abuse material. Last year that jumped to 6TB, and it is probably going to keep going up."

Jim Cole, Special Agent and Section Chief, Victim Identification, Homeland Security Investigations, Cyber Crimes Center, Child Exploitation Investigations Unit, USA

"The average size question is difficult to answer for INTERPOL because we only get the triaged material and the volume really depends on the case. However, the biggest seizure here at INTERPOL is 40TB of child sexual abuse material. It is the biggest seizure of child sexual abuse material we have ever seen in France."

INTERPOL, Crimes against Children unit, Vulnerable Communities Team.

HOW MUCH IS 1TB AND 100.000 HOURS OF VIDEO?

to a thousand gigabytes (GB), and a million megabytes (MB). The average computer has around 500GB of storage space, but a large hard drive can have up to 2TB of storage. A mobile phone has between 8 to 32GB of storage on average.

Relative to the size of images, a normal sized image is usually around 5MB. This means that you can fit around 200,000 images onto a

To put into perspective just how much 100.000 hours of film is, a year is 8,760 hours. This means that it would take over 11 years to look at 100.000 hours of video material, if one person was looking at it 24 hours a day.

10,000,000 1.000.000 400,000 2,000,000 3,000,000**MITIONS** 500,000 150,000

COMMENTING ON THE RESULTS

Johann Hofmann, Head of Griffeye.

EXPLOSION OF MATERIAL

GRIFFEYE

Griffeve is NetClean's

peer company. Griffeye

develops Griffeye

world's premier

ing intelligence

Analyze, one of the

platforms for build-

through processing

and analysing large

quantities of images and videos. It is used by law

enforcement agencies

uncover critical clues,

find relationships and

visualise information

that would normally

on a daily basis

have been hidden in the

vast flow of data seized

across the world to

It is incredible how the amount of data in circulation has increased in recent years. The development of mobile phones, combined with stable and fast internet connections and the ability to store large amounts of data, mean that it has become extremely easy for anyone to produce, distribute and save images and videos in large quantities. Every year, the amount of material that police need to efficiently process and analyse in their investigations increases, not just in child sexual abuse investigations, but in many other crimes.

We know that law enforcement agencies around the world deal with unbelievable amounts of material, but I must admit that even I was surprised when I saw the numbers in the biggest cases. 1000TB of data, over 100 million images and over 100,000 hours of video is unimaginable amounts of material. Having to go through the material manually would be an impossible task.

Handling these investigations requires a variety of technologies and tools, and I am happy to see a lot of development in this area. A strong trend, (which is extremely important for workflow processes), is that increasing numbers of technology providers are opening up their tools to collaboration, using standardised data protocols for sharing information, instead of trying to lock the user to a single tool provider. This allows police officers to move information and data between the different tools, to simplify their work processes.

Project VIC, (co-founded by NetClean), is a great example of the success that can be achieved through a combination of technology, training and collaboration.

The amount of material will only continue to increase in the future. It is driven by the technology development allowing for more ways to distribute and store material. An equally, if not more important, factor is that as better internet infrastructures develop in new parts of the world, we will start to see an explosive growth of production and distribution of material in those countries too. However, more information does not have to mean chaotic investigations. With the right tools, information is a valuable asset enabling greater success in every case.

A single TB is equivalent

hard drive of 1TB.

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The victims are primarily from Europe and North America

There is a common misconception that the children in child sexual abuse material are primarily from Asia. However, our survey shows that the material that the police handle in their investigations primarily feature children from Europe and North America.

One of the respondents in the survey gave two different reasons as to why children from certain parts of the world are more common:

"Two factors: Countries with high internet devices per person and reliable internet service and countries with poor or no laws prohibiting sex offenses against children and also have easy access to children."

Younger children and more violence

Several police officers commented that they see an increasing trend of images and videos with infants and toddlers. They also said that the images and videos are becoming increasingly violent. The same trend was reported in the NetClean Report 2015.

"Every case the amount of infants/toddlers is increasing. It started where an occasional case would have a high volume of infants/toddlers. Now each case has it and some have thousands of them."

"I have seen an increase in sadomasochistic "torture porn" of children; there also appears to be a greater number of images/videos depicting the sexual abuse of non-verbal children, i.e., infants and toddlers."

"Continues to be a rise in more graphic material, highest category, and younger/ youngest age, particularly babies/toddlers."

COMMENTING ON THE RESULTS

INTERPOL,

Crimes against Children unit, Vulnerable Communities Team.

INTERPOL:S DATABASE

It is difficult to assess exactly where the children in the images come from since there are a large amount of images where the origin is still unknown. The general impression however, is that most children depicted are of Caucasian origin. Although Asia is a known transnational child sexual abuse destination, it is a misconception that most children in the images are from East Asia. What we see at INTERPOL right now is a considerable increase in mostly new material from South America and China. The rise in the amount of material from China has been exponential in the last months and Russian material still holds a big percentage as well.

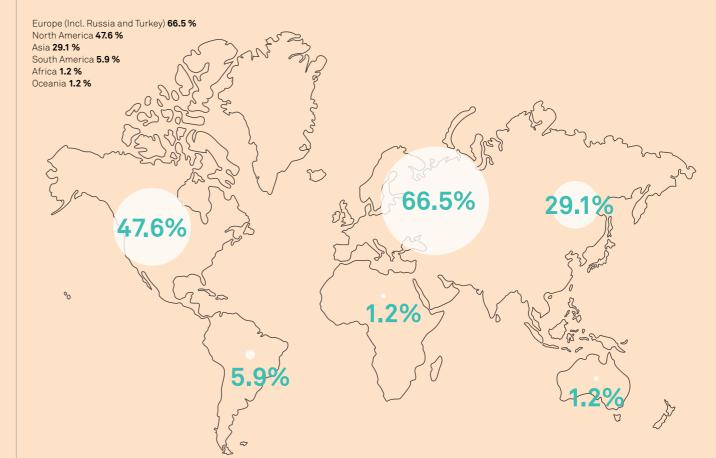
The numbers that we do have are from the ICSE database (*The International Child Sexual Exploitation image database*), which is managed by INTERPOL. Out of 10,264 series in ICSE where either the child is identified or there is a strong suspicion about the possible country of abuse, we can deduct the following:

Europe	4,796
(total of 39 countries,	
including Russia and Turkey)	
North America	4,495
(USA and Canada)	
Asia	662
(total of 13 countries)	
Oceania	360
(Australia and New Zealand)	
South and Central America	345
(total of 15 countries)	
Africa	69
(total of 4 countries)	

When interpreting the numbers it is important to note that a series can contain multiple victims. ICSE also only contains material uploaded by member countries, mostly for victim identification purposes. It does therefore not reflect the whole quantity of existing child sexual abuse material online, but only the part investigators decided to upload.

Geographical origin of the children in the images and videos:

(The police officers surveyed were asked which is the most common geographical origin for the children depicted in the child sexual abuse material. They could answer more than one alternative.)



COMMENTING ON THE RESULTS

Björn Sellström,

Swedish Police, National Operative Department (NOA), Swedish Cyber Crime Centre, the Child Sexual Abuse Group.

TECHNOLOGY DRIVES THE PRODUCTION OF CHILD SEXUAL ABUSE MATERIAL

The results in this report reflect my experience. However, from viewing the images, it is difficult to determine whether the children come from Europe instead of the USA, or vice versa – unless for some reason you suspect or know the origin of the image. The material could also just as easily come from Australia. What we can see, is that the majority of the children depicted in child sexual abuse images are of Caucasian origin.

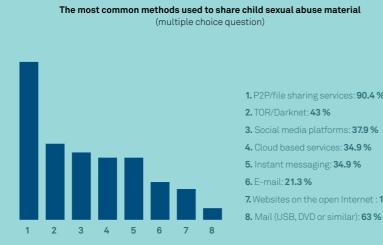
My conclusion is that what drives the production of child sexual abuse material is the internet infrastructure and technology in a specific country. In Europe and the USA, internet access is widespread and technology is highly developed. Therefore, that is where we see the largest share of material coming from.

It is important to understand that the overwhelming majority of child sexual abuse material that we see in the investigations is home recorded, and not commercial. As a result, it reflects the children who live where the material is recorded. When I started working on child sexual abuse investigations, there was quite a lot of commercial material from Eastern Europe, and those images and videos are still in circulation. However, the new child sexual material that we see is primarily privately recorded.

The results do not indicate that there is less child sexual abuse in some parts of the world. They only reflect that the abuse is not documented and shared to the same extent. The more new technology and internet connectivity develops around the world, the more material we will see from Africa, Asia and South America.

A relevant question is whether the respondents of the survey see more children from Europe and the USA in their investigations because they work in those geographical areas. To some extent this may be true, however, child sexual abuse material spreads across the world and across borders. If there had been a large amount of child sexual abuse material from Africa, Asia or South America in circulation, we would have been aware of it and we would have seen the images and videos.

What we can see, is that ordered and live-streamed abuse over the internet is strongly linked to Southeast Asia. Virtually all the cases we handle are from the Philippines. Those cases are also strongly linked to infrastructure and technology – almost all perpetrators are from Europe and the USA.



1. P2P/file sharing services: 90.4 % 3. Social media platforms: 37.9 % 4. Cloud based services: 34.9 % 5. Instant messaging: 34.9 % 7. Websites on the open Internet : 17.3 %

File sharing is the most common method of distributing child sexual abuse material

When asked the question 'which methods are most commonly used to share and distribute child sexual abuse material?', 90 per cent of the police officers answered P2P/file sharing. Other common ways to distribute child sexual abuse material is through darknet/TOR, social media, cloud based services and instant messaging.

P2P is not only the most common way to share material, it is also where the majority of the material is shared. The police officers in the survey reported that 50-80 per cent of all material found is through P2P and file sharing.

However, it is important to emphasise that just because law enforcement find most of the material on P2P networks, that does not have to be a correct reflection of where most of the material actually is. Many police officers commented that TOR is probably more commonly used to share child sexual abuse material than what is reflected in the investigations.

"I am not sure P2P is most common. It is the easiest way to catch people. TOR is very difficult to catch people on but probably more prevalent than we know."

"I believe TOR is another frequently used venue - it is more difficult however to find artefacts proving TOR was the venue for distribution."

"P2P/file sharing services are the most common when you work proactively. Passively, we receive more reports from social media platforms."

"Most suspects combine several of these techniques, particularly email, cloud-based, and social media."

A number of police officers also highlighted that they see an increasing trend towards material being distributed through cloud based services.

"Increased use of cloud based storage."

"Less P2P, more cloudshare and forum/TOR usage."

"Back up to cloud storage which makes it hard to make sure the pictures are gone."

P2P

P2P (peer-to-peer)/ file sharing. A way to directly share files between two or more people without having to store the files on a central server. It is called P2P because the users within the network have equal status. Examples of file sharing services are The Pirate Bay, Gnutella and Kazaa.

TOR/DARKNET

Darknet is ofter confused with deepnet/ deepweb. Deepnet is everything on the web that is not searchable through search engines such as Google, Intranets, databases, password protected sites or sites that require payment. Darknet refers to anonymous websites and encrypted networks that are most commonly reached via TOR. TOR makes it possible to communicate anonymously over the Internet.

CLOUD BASED SERVICES

Make it possible to store and share data files with others without having to save the material locally. Examples of cloud based services are Dropbox, Gmail, Google Drive, iCloud and Box.

INSTANT MESSAGING

Makes it possible to send an instant message directly to another person through an app or the web. It is often also possible to transfer files. or have video conversations through instant messaging services. Example of instant messaging services are Skype, WhatsApp. Messenger and iChat. iChat etcetera.

COMMENTING ON THE RESULTS

INTERPOL.

THE LATEST MATERIAL IS SHARED ON TOR

monitoring.

sexual abuse material.

COMMENTING ON THE RESULTS

Björn Sellström,

ABUSE MATERIAL IS SHARED

Based on my experience and the cases that we work with, I would say that P2P is absolutely the most common way to share child sexual abuse material. It says something about how little perpetrators know of their vulnerability – it is not hard to find people on file-sharing sites. When we find an IP address, it very rarely turns out that someone else has used the network or the proxy, the IP address usually leads us to the offender.

However, considering how easy it is to find information on how to hide your identity on the internet, my guess is that most child sexual abuse material is shared on the hidden part of the internet, using anonymisation technologies.

Social media is also widely used and, most importantly, has created a platform for grooming, online child sexual abuse and ordered abuse. Other than that, my gut feeling is that social media is rarely the primary method for distribution. However, I do think it is used to make contact with like-minded peers and for offenders to spread tips and information to each other.

Social media is a major challenge for law enforcement in Sweden, because the platforms are often based overseas and are regulated by different laws. Companies in Canada, for example, are not allowed to disclose information to foreign authorities, which means that we must make a legal request to get information. It is both time and resource intensive. We need better international regulation in order to tackle this type of problem.

Crimes against Children unit, Vulnerable Communities Team.

The reason the majority of child sexual abuse material might still be shared on P2P networks is probably because it is an efficient, easy to use mode of sharing large volumes of material. P2P is also a technique that is common for police to investigate and easier to investigate than for example the darknet, which requires a lot of time, technology and resources.

At INTERPOL we are more involved in TOR investigations because that is where a lot of the latest material is shared and where we are focusing proactive online

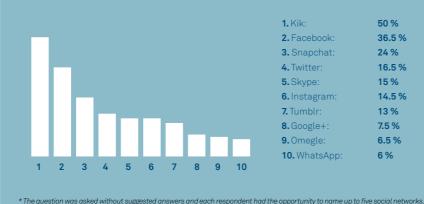
What we can say for sure is that ALL existing technology is misused to share child

Björn Sellström, Swedish Police, National Operative Department (NOA), Swedish Cyber Crime Centre, the Child Sexual Abuse Group.

MORE INFORMATION IS NEEDED ON HOW CHILD SEXUAL

There is a lack of comprehensive and well researched information on where and how the largest proportion of child sexual abuse material is distributed and shared. It would take a lot of work to find that out, but the resources used to do so, would be well invested. Looking at the situation in Sweden specifically, we don't even have collective expertise in how social media is used for sharing child sexual abuse material, primarily because NOA is not automatically informed of all cases around the country. Therefore, the results of the survey reflect the experiences of police officers working in child exploitation.

Investigators were asked to rank their incoming social network complaint activity



2. Facebook 36.5 % 3. Snapchat: 24% 4 Twitter 165% 5. Skype: 15 % 6. Instagram 14.5 % 7. Tumblr: 13 % 8. Google+: 7.5 % 9. Omegle: 6.5 % 10. WhatsApp: 6%

50 %

Social media is used to share child sexual abuse material

As the use of social media continues to increase in society, the problem of child sexual abuse material being distributed through social media follows. This trend was highlighted in the NetClean Report 2015, and confirmed in this year's survey. 37.9 per cent (Insight 4) of investigators stated that social media is one of the most common ways to distribute child sexual abuse material.

In one of the questions, investigators were asked to mention trends that they see as increasing and important. 34 per cent mentioned that self-produced material, grooming, sextortion and sharing of child sexual abuse material over social media is increasing and poses a big challenge.

Many police officers also commented that the trend is driven by the number of social media platforms, apps and the increasing usage and technological developments of mobile phones.

"Increasing use of social media for production of child pornography including through the use of sextortion."

"Children groomed/forced to send naked pictures or video of themselves."

"More platforms - more sharing using apps and phones."

"I see a growing problem in young people age 10-17 sending pictures to boy-/girlfriends and after end of relationship the pictures are shared. And how willing young people are to show themselves naked on webcam."

"Sharing of images and videos between minors, which is then spilled to adult offenders."

Many reports from Kik and Facebook – and that is positive

The investigators were also asked which social media networks are most commonly used to share child sexual abuse material. Investigators reported that they receive a significant amount of leads to investigate, and that Kik and Facebook referrals represent the majority of the leads, followed by Snapchat, Twitter, Skype, Instagram and Tumblr.

As the headline suggests, the results should be interpreted as a positive indicator of corporate responsibility. The social networks that make an effort to detect and report material, also show up in the results. Please read the commentary from Richard W Brown at Project VIC explaining the results.

GROOMING

Is when an adult seeks contact with a child with the intention of later sexually abusing that child. First contact is often taken on a chat forum.

SELF-GENERATED MATERIAL

This can be nude or undressed images and videos that the children themselves have taken either voluntarily or as a result of coercion. It can be nude images that youths send to a girlfriend/boyfriend or upload onto the Internet seeking affirmation, usually without understanding or thinking of the risk of the images spreading. But it is also about children that have been groomed and then coerced or blackmailed into sending images and videos of themselves.

SEXTORTION

Sextortion is a relatively new term that comes from the terms sex and extortion. Both adults and children can be subjected to sextortion. However, in this report it is about adults who coerce and blackmail children over the Internet and force them to send nude photos of themselves or to severely abuse themselves in front of a web camera.

SOPHISTICATED TECHNOLOGY GENERATES CYBERTIPS

Richard W Brown.

The result is partly an indication of where child sexual abuse material is shared, but it needs to be explained and clarified. The social networks that work most proactively with the National Center for Missing & Exploited Children in the United States and the National Child Exploitation Coordination Center in Canada, are using sophisticated technologies such as PhotoDNA to increase their detection capabilities. Thus, they will have an increase in overall volume by nature. Consequently, this results in larger amounts of cyber tips being sent to police to investigate.

Both Facebook and Kik work aggressively to handle the problem of child sexual abuse material. For example, Facebook monitors its channels and self-reports everything that it finds to authorities in the USA. The social networks that don't work with this issue will more rarely show up in cases investigated by police. That doesn't mean that there isn't illegal material being shared on their platforms.

The proliferation of mobile phones and social network applications available on mobile phones has also played a big part in the dramatic increase in child sexual abuse material (both known and self-generated) being reported. In essence, the more common and popular the mobile app, the more likely an increase in abuse material being transmitted.

COMMENTING ON THE RESULTS

National Association to Protect Children, Protect.org and Project Coordinator for Project VIC.

COMMENTING ON THE RESULTS

INTERPOL.

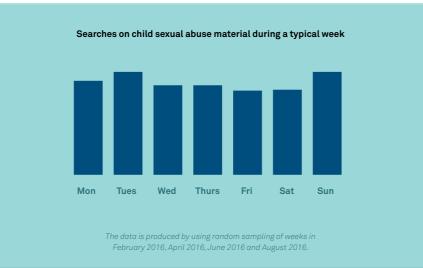
Crimes against Children unit, Vulnerable Communities Team.

ALL TYPES OF CSA MATERIAL ARE SHARED

INTERPOL's involvement in social media is minimal. the only type of investigations we do are open source investigations and reports that we get from the public. The material that we do see on social media networks is all sorts of child sexual abuse material that offenders collect and share, not just extorted material that children have been forced to share. Generally social media does not seem to be used to share tips, we see more of that on TOR.

We believe social media networks should do more. They report child sexual abuse material because it is mandatory and only share minimal information (if any) when requested to do so by the police. Thankfully there are a few exceptions, especially in those cases where there is an employee within the company that we can contact directly. Out of all the social networks, Facebook is one of the must communicative with law enforcement agencies.

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Searches of child sexual abuse material distributed across all hours of the day

500,000 searches for websites showcasing child sexual abuse material every month

The data is produced by random sampling of every Tuesday in February 2016.

According to the police officers in the survey, material is commonly shared on the internet (17.3 per cent, see insight 4).

To help tackle this, several Internet Service Providers have committed to blocking websites on the open internet that are known to contain child sexual abuse material. In Sweden, there is a collaboration between the Internet Service Providers and the Swedish Police to reinforce this.

One operator that has worked with this issue for a long period of time is Swedish based Tele2. Every month Tele2 blocks half a million searches for child sexual abuse material.

When do people search for child sexual abuse material?

By looking at the searches, it is also possible to get information on which days and the time of day that people most frequently search for sexual abuse material on children.

The results show that searches are relatively evenly spread across all days of the week. Searches also happen throughout the day and night. There is a little less activity between 2am to 9am and around 3pm. Most searches take place in the morning and just before the end of the day until midnight.

500,000

searches for child sexual abuse material, on average, are blocked by Tele2 every month, distributed over all the countries where they operate.

Sweden, Estonia, Latvia, Lithuania, Croatia, the Netherlands, Austria, Germany, Kazakhstan.

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COMMENTING ON THE RESULTS

Jonas Lindström. Director Group Security & Business Insurance, Tele2.

EFFORTS TO STOP CHILD SEXUAL ABUSE MATERIAL – A HYGIENE FACTOR

Helping to stop the spread of child sexual abuse material and child sexual abuse is such an important issue that we want to do everything we can to stop it. The effort falls within the framework of corporate social responsibility, but we see it more as a hygiene factor. It is not about financial interests, we are pushing this issue because it is important, and is something that we are proud of.

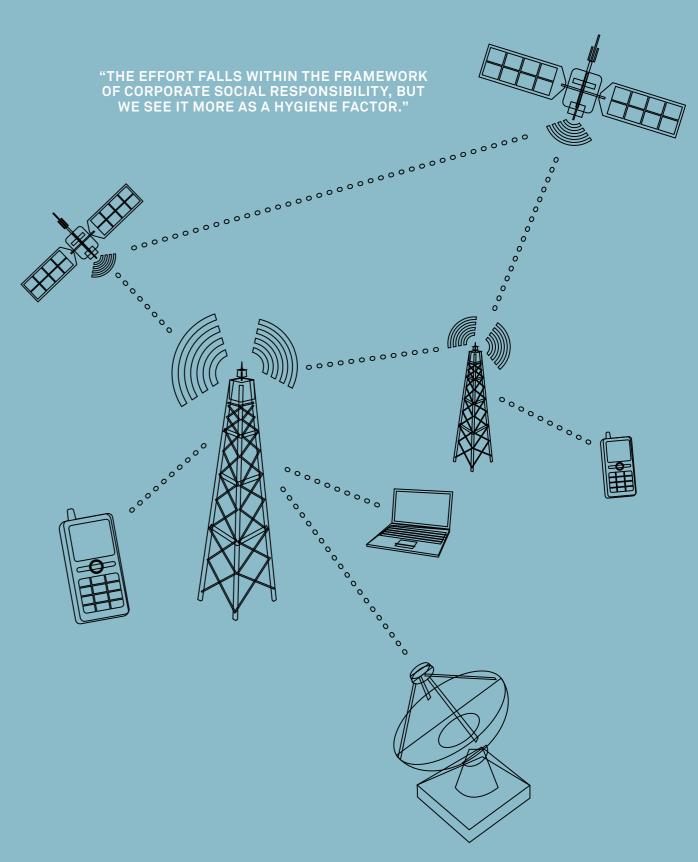
Since 2012, we have been blocking child sexual abuse material in all countries we operate within, including Sweden, Germany, Austria, the Netherlands, Croatia, Estonia, Latvia, Lithuania and Kazakhstan.

By blocking this material, we prevent users from accessing it. It is extremely important to point out that the only material blocked includes websites that law enforcement agencies have classified as containing child sexual abuse material – nothing else.

In all nine countries that we operate, we also take responsibility for our internal IT infrastructure to ensure that abuse material is not handled within the company. This means that we can detect if someone manages illicit material on their work computer. We have a mature and stringent internal process for handling this, and effective dialogue with the relevant authorities.

The internal response has been very positive. Employees feel great pride that we are doing something tangible to tackle these issues. It is having a real impact and is making a difference!

This is such an important issue, doing this is almost a given, but you have to have the courage to take action. It is of course up to each and every business to make their own decision, but to us it is important to be transparent and clear that we have taken a stand on this issue. Even though we have been working on this initiative for several years, we have rarely communicated it externally. Now we want to take a more formal role and challenge our industry, as well as others to follow suit.



Child sexual abuse material is found on work computers in both the private and public sector

As the numbers in insight 6 show, people search for child sexual abuse material at any given time during the day and night, even during working hours.

That work computers are used to handle child sexual abuse material is confirmed by NetClean's customers. Experience shows us that more than one in a thousand employees handles child sexual abuse material on their work computer.

Although the majority of all child sexual abuse material investigated by the police is stored on private devices, police officers participating in the survey also confirmed finding material on work computers.

More than two thirds, 70 per cent, of the respondents reported working on cases that involved child sexual abuse material found on work computers during the last year.

Almost half of the respondents, 4.7 per cent, said that they worked on investigations where they found child sexual abuse material on computers in the public sector.

COMMENTING ON THE RESULTS

Christian Berg, CEO and founder NetClean.

MORE THAN 80 CASES OF CHILD SEXUAL ABUSE MATERIAL ON WORK COMPUTERS REPORTED IN SWEDEN EVERY YEAR

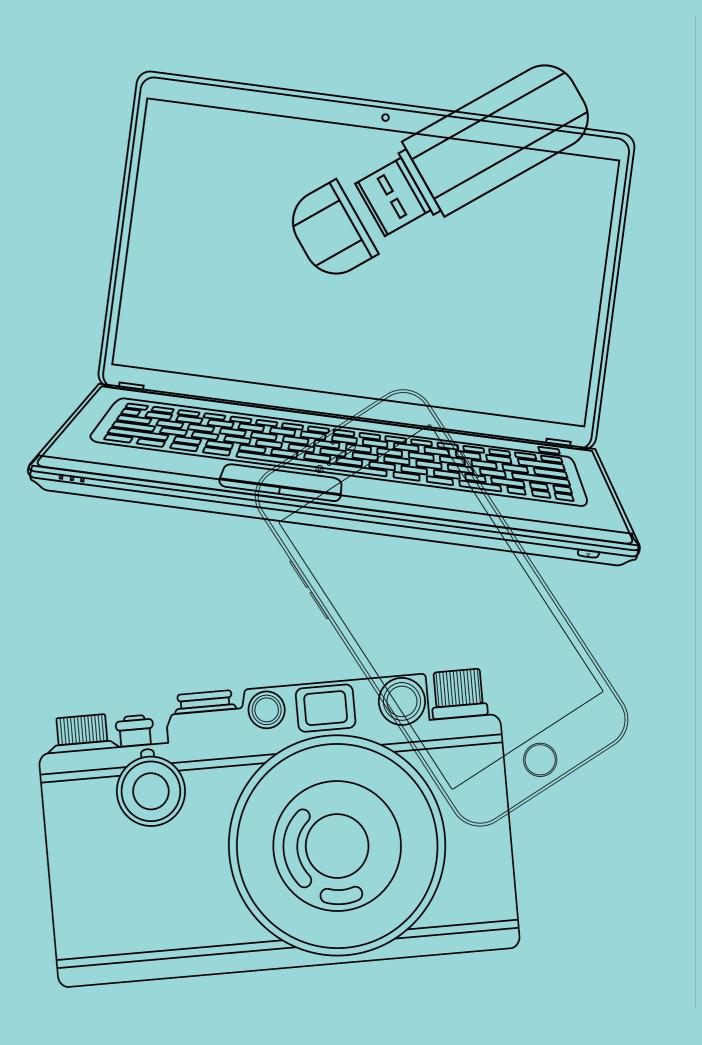
The majority of child sexual abuse material that law enforcement finds in investigations is stored on private storage devices, such as hard drives, computers, mobile phones and cloud services. However, even though the material is often stored on private devices, it can be downloaded, shared and consumed in other ways – including on a work computer.

Our experience working with customers in both the private and public sector, indicates that one or two people in a thousand access child sexual abuse material from their work computer. In these cases, the organisations in question have clearly informed their employees that they have a system in place to detect illicit material. The real number is likely higher.

In addition, five to eight cases every month are reported to The Swedish Police (*The National Operational Department, NOA*) from companies that have discovered child sexual abuse crime using our software. That means there are more than 80 cases every year reported where people have handled child sexual abuse material on their computer – and that figure only applies to cases that have been reported to NOA (*for example some cases are instead reported directly to the local police*).

It may appear strange that people use their work computer to search for, download and look at child sexual abuse material. But, it's not as strange as it sounds. The work computer is often perceived as one of the most private possessions employees own. While other computers, tablets and mobile phones are often used by the whole family, typically it is perceived that no one else handles the work computer. It is also often portable and easy to carry.

Most commonly the work computer is used to look at material that an employee has taken with them. This is confirmed by the fact that most alarms that our customers have, come via a USB stick. One reason for choosing to store images and physically bring them may be because child sexual abuse images constantly move and disappear from the internet. Images are therefore downloaded and the USB is perceived as a safe way to store them.



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Major challenges: encryption, anonymisation technologies, live-streaming and "deleters"

The police officers in the survey highlighted a number of the challenges they face whilst working on child sexual abuse cases. Encryption, anonymisation technologies, live-streaming and "deleters" are the four areas that were most frequently mentioned.

Encryption and anonymisation technologies

Almost a third, 32 per cent, of the respondents mentioned encryption and anonymisation technologies such as TOR as an increasing trend. Also as one of the major challenges of investigations.

"Encryption, use of TOR and the darknet for hosting and distributing child exploitation material."

"Encryption and TOR remain growing/existing problems."

"Wider use of TOR and Darknet to attempt to avoid detection."

"Anti-forensic techniques more prevalent. Encryption in particular."

Live-streaming

Live-streaming has been a widely discussed trend for several years. It is mentioned as one of the key challenges that police officers working on child sexual abuse cases face.

"Live-streaming of abuse increasing."

- "Users are streaming through tor networks or in general streaming."
- "Increasing grooming cases livestream."

Deleters

Although the majority of offenders still collect large amounts of material, some people have started to make efforts to dispose of material after they have looked at it and are therefore called "deleters".

"Efforts to dispose of images and videos after viewing." "Many of the P2P cases today involve persons who download and delete. Expediting the execution of search warrants is more important than ever."

"The immediate deletion of files after they have been downloaded."

A GLIMPSE OF **FUTURE TRENDS?**

There are a number of areas that have been mentioned by just a few police officers, but that are interesting because they show something new:

- 1. The offenders, not just the victims, are becoming younger. "Younger offenders. Age has moved significantly lower."
- 2. More 3D-generated material. "3D generated imagery and cartoons are on the rise."
- 3. An increasing amount of child sexual abuse material from the African continent. "Starting to see an increase in

images coming out of Africa."

COMMENTING ON THE RESULTS

Björn Sellström,

Encryption and anonymisation technologies are among the major challenges in combatting the spread of child sexual abuse material and child sexual abuse. When technologies first enter the market, they are expensive and inaccessible, later they become cheap and readily available. That is where we are now, and as a result we see an increase in the use of both encryption and anonymisation technologies.

Encryption means that we cannot access the material, unless we manage to seize it before it is encrypted. Before encryption, we could show up and just pick up all devices, today we need to seize the material while the suspect is online. That requires a completely different kind of planning and operations, with many more people involved. Sometimes we can also access or break passwords, which is something that we have achieved a number of times, however, it requires a tremendous amount of work.

TOR is a concern for law enforcement in several ways. The most important question we need to ask ourselves is: do we really want to find the answer to uncovering people on TOR? The reasonable answer to that, as far as I am concerned, is no. The consequences of breaking TOR would only be the creation of a new TOR. Anonymisation is not just about crime, there must be a space for anonymity online for whistle-blowers or people fighting for democratic rights around the world. If we managed to break TOR in Sweden, so could North Korea, Syria or Iran. The solution is not to break TOR, but to actually police TOR.

As for live-streaming it is impossible to say whether it is increasing or not. Most likely, the problem is much bigger than we know. What we can say, is that the Philippines is seeing an increase in children being bought and used for livestreaming purposes, which probably means that the problem is increasing. It is important to add that even if the Philippines has been, and still is the primary market for this type of child exploitation, (where there is poverty and children there is a breeding ground for child sexual exploitation) it is not only happening there. We have similar cases with Swedish children, where both the perpetrator and the person ordering the abuse are Swedes. The difference is that those cases do not include a commercial element.

It is equally difficult to say how common the trend with "deleters" is. If people just look at the material and then delete it, we will normally not know about it. Those cases mainly come in through excess information, when we seize a computer for another reason. Therefore, the problem could be much larger than we know. However, my experience is that most of the offenders collects large amounts of material, so much they will never have the time to look at it all.

Swedish Police, National Operative Department (NOA), Swedish Cyber Crime Centre, the Child Sexual Abuse Group.

FROM ENCRYPTION TO LIVE-STREAMING

Increased awareness of female offenders

Female offenders are rare, but they do exist. Nearly half of the respondents in the survey, 47.5 per cent, said that they worked on cases involving female offenders during 2015. However, the vast majority of the police officers reported that it only makes up a very small number of investigations.

A fifth, 20.9 per cent, of police officers in the survey are of the opinion that the number of female offenders is increasing. However, it is not a clear trend, 35.6 per cent said that they had not seen any change and 41.5 per cent said that they don't know.

The reason for the uncertain answers is probably that female offenders are so rare in police investigations that it is difficult to plot a trend. This is also reflected in the comments.

"In 11 years, I have only had one female offender."

"I've only had one female suspect in 16 years."

Are women induced by men?

Many of the police officers said in the comments that most female offenders are induced by men, but opinions on this differ.

"I have seen a large number of images/videos involving women sexually abusing children but there generally seems to be a man also involved. I don't recall seeing any where the woman is the main abuser."

"Induced to offend by a male."

"I have only had one case where a female early years educator said she was sexually attracted to children. She was not distributing for a male partner."

"Have found child sexual abuse material where females are actively participating in the acts with children."

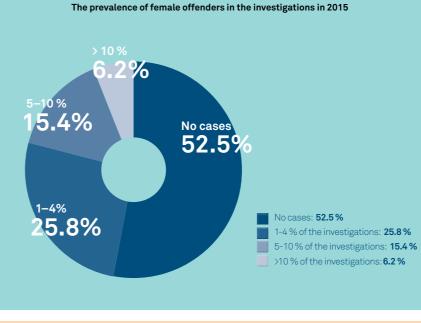
Increasing awareness

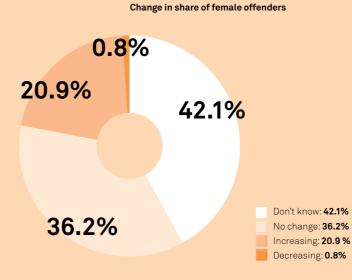
Several of the comments highlight that the increasing awareness of female offenders leads to more women being found and arrested, which in turn leads to an experienced, but not actual, increase.

"Agent awareness and debunking stereotypes."

"Most criminal behaviours separating female from male offenders are weakening or dissolving altogether."

"We are more aware of it [female offenders]."





"MOST CRIMINAL BEHAVIOURS SEPARATING FEMALE FROM MALE OFFENDERS ARE WEAKENING OR DISSOLVING ALTOGETHER."

COMMENTS ON THE RESULTS

THREE DIFFERENT VOICES ON FEMALE OFFENDERS

Michael Bourke,

Ph.D., Chief, Behavioral Analysis Unit, United States Marshals Service.

Female offenders are more prevalent than people think - some studies estimate that more than 20 per cent of sexual abuse occurs at the hands of women. While there are some differences in how women go about gaining access to victims and the grooming techniques they use, males and females can have identical motivational pathways. Women can be paedophilic, sadistic, cognitively slow, or have personality disorders that may influence their decision to abuse children.

However, as a society we have a hard time believing that females offend because we tend to see them as maternal, nurturing, and protective. As a result, women fall out of the system at every step. Women are less likely to be detected, less likely to be arrested, less likely to be charged in court and less likely to be convicted of a crime against a child.

This is also the reason behind the old and discounted belief that female offenders are always induced by men. They are not. We have worked on a number of cases where women are acting on their own - writing stories, producing and uploading sexually explicit material, and sexually abusing children. Female offenders open up doors for much needed research.

Jim Cole.

Special Agent and Section Chief, Victim Identification, Homeland Security Investigations, Cyber Crimes Center, Child Exploitation Investigations Unit, USA.

The number of female offenders are increasing in the investigations that we deal with. We are seeing more cases where females actively take part in the abuse, and we have also seen some cases with female offenders acting on their own. However, female offenders make up a very small percentage of the cases. Offenders are overwhelmingly male. Most commonly there is also a male counterpart involved in the cases, in some circumstances driving the abuse.

It is too early to say whether the increase is an issue of more visibility and awareness, or whether the number of female offenders is actually increasing. Or indeed if women are starting to act more on their own. This is something that we are looking into, but there is still much that we don't know.

Kevin Lawes.

Kevin Lawes, Homeland Security Investigations Special Agent (retired), owner of K&S Teaching and Consulting, USA. Kevin worked with internet crimes against children for nearly twenty years, eleven of those online undercover and has worked on some big cases with female offenders.

There is very little data on female sex offenders, and many people just don't see women as potential offenders. I have worked on several high profile cases involving women, and there are a number of female offenders out there, but I don't think that there are many and I don't think that it is increasing. I think if it was, we would come across it more often, and the truth is we rarely do. However, whenever there is a case, it always makes big headlines.

Females are not always induced by a male, but in the vast majority of cases they are. However, that they are rare does not mean that we should not look for them. It is important to look for the unusual and not just discount the woman because it is hard to imagine a woman being involved.

"IT IS TOO EARLY TO SAY WHETHER THE INCREASE IS AN ISSUE OF MORE VISIBILITY AND AWARENESS. OR WHETHER THE NUMBER OF FEMALE **OFFENDERS IS** ACTUALLY **INCREASING.**"

Increased focus on identifying and saving children

Of the 34.8 per cent that said that they don't work with victim ID, over half said that someone in their unit or department has that responsibility, or that they have someone else to send those cases to. That means 80 per cent of the respondents said that their department in some way works with victim ID.

Of those that have said that they don't work with victim ID, several have explained it as a result of lack of resources, and the right resources.

"Lack of resources."

"Too much work."

had access to children."

"Efforts by the suspect to hide identity of themselves and their victims."

"Offenders are getting better at hiding their tracks."

Other challenges that the police officers mention are the number of victims and lack of resources (especially lack of time), as well as difficulties to know where in the world the children come from.

"The sheer number of victims."

"The volume of images and videos makes it difficult to put the time into victim ID."

"Time pressure. It's difficult to find time for such a time consuming jobs as ID:ing when you have large cases that needs classification."

"The victims can be from anywhere in the world."

"Location of victim getting local law enforcement to assist in some jurisdictions."

other countries.

offenders."

"Uncooperative foreign based e-mail or application providers."

"Identifying people from social media accounts. Cooperation from social media apps."

Almost two-thirds, 65.2 per cent, of police officers in the study reported that they, as part of their daily work tasks, work with victim identification (victim ID).

"Time is the main reason. Victim ID is the responsibility of the Investigator in charge of the case when reviewing data. And usually only in circumstances where the suspect

Challenges when working with victim ID

The main challenges when working with victim ID are largely the same as the challenges identified for child sexual abuse investigations in insight 8; encryption, anonymisation technologies as well as other ways of hiding technical tracks or efforts to hide the identity of both offender and victim.

Several police officers mention that it is a challenge to get help from social media platforms, app-companies and other technology providers that are based in

"Getting assistance from instant messaging app companies to identify victims and

COMMENTING ON THE RESULTS

Jim Cole.

Special Agent and Section Chief, Victim Identification, Homeland Security Investigations, Cyber Crimes Center, Child Exploitation Investigations Unit, USA.

THE RIGHT PATH TO TAKE

The survey indicates that more and more law enforcement agencies are taking a victim centric approach to child exploitation cases. Victim identification can take many forms and all agencies should conduct victim identification to some extent when they approach cases with a victim centric methodology. In addition, there are specialised victim identification programs with specialised training, equipment and software to conduct full image, video, audio and data analytics, enhancements, clarifications, etcetera. Full specialised victim ID is highly resource intensive in time, technology, training, etcetera. These specialised programs are mainly found at larger agencies like federal, national and in some instances state/regional levels.

However, that doesn't make the result of the positive trend any less significant. A victim centric approach is the focus that agencies should have in their day to day work, and is how we will achieve the biggest impact. In the past investigators did not think about victim ID, and if they did they did not know where to turn. That has now changed. In the last three or four years we've seen a real paradigm shift both in the USA and globally.

Project VIC has made a big impact in terms of global awareness and training of investigators across the globe. In the US, the specialised victim ID unit, where I work, and that was started up five years ago has also been an important factor. It gives agencies that don't have the resources to do victim ID themselves somewhere to turn to. In those five years almost 60 people have been trained as victim ID specialists and our rescues of victims have increased more than 10 times. As those specialised agents start to talk to other agencies, both the victim centric approach and awareness that there is help available spreads.

Even if victim ID is still seen as a new and novel approach it is not a new idea. For nearly two decades, great work has been done in, for example, Sweden, Australia and Canada. However, it has mainly been driven by individuals with a passion and not necessarily as a globally accepted practice. If that passionate person has left, he or she has not always been replaced by the managerial level. Victim ID is now, in several countries, increasingly being engrained in every day routines, policies and systems, which makes it less dependent on individuals.

One of the barriers to the success of victim ID is the idea that agencies only want to work on cases in their own jurisdiction. As anonymisation and encryption becomes more prevalent and investigators must become more creative, we have to let go of the geographical boundaries. When working on a case involving TOR we are not going to know where that individual is until the end of the case, but we still need to work on the case. If someone is working to save a child, it shouldn't matter if that child is half a world away. Agencies must start to look at their role as a global responsibility, and to do that we need to get management buy-in.

I wholeheartedly believe that the victim-centric approach is the right path to take. With this shift we have seen a large increase in the number or victims being saved, here in the USA and globally. Even if there is much work to be done before we see victim ID as "*the way we do business*", it is slowly becoming more of a mainstream law enforcement concept.

MORE THAN 1600 CHILDREN SAVED

THE POLICE OFFICERS IN THE SURVEY WERE ASKED HOW MANY CHILDREN THEIR UNIT HAD SAVED FROM SEXUAL ABUSE IN 2015.

TOGETHER THEY HAD SAVED 1610 CHILDREN.

WHY IS IT IMPORTANT TO FIGHT CHILD SEXUAL ABUSE MATERIAL?

We end this report with a reflection on why it is so important to fight child sexual abuse material. The following question is sometimes asked: Is it not just a picture, and does it really matter if someone looks at an image? For us, the answer is crystal clear.

Each image or video is documented sexual abuse of a child and depicts the worst moment of that child's life. When the image spreads across the world the offense is repeated, again and again.

But it does not stop there. It is not a harmless act to look at child sexual abuse material. It is not something that you do, unless you have a sexual interest in children. There is a strong link between watching illicit material and sexually abusing children.

By detecting child sexual abuse material, we can find those with a sexual interest in children. The first step is to protect children from being abused and that's why finding the material first to uncover the victims, is so important.

Michael Bourke works with sex offenders in the USA and has conducted several studies on the topic. Here he talks about the myth of the harmless perpetrator.

> Christian Berg, CEO and founder, NetClean

Michael L. Bourke.

Ph.D., Chief, Behavioral Analysis Unit, United States Marshals Service, USA.

THE MYTH OF THE HARMLESS HANDS-**OFF OFFENDER**

60-85 per cent of those who look at child sexual abuse material also commit hands-on sexual offenses against children. It is a myth that there is a large group of hands-off offenders that are no danger to children.

Years ago there were professionals typically academics – who assumed there were two groups of individuals who are sexually attracted to children: 1) so-called "hands-off" offenders, who limit their sexual behaviour to viewing photographs and online videos; and 2) hands-on offenders. There was also a misguided notion that looking at child sexual abuse images would mitigate the urges of people with a sexual interest in children.

Same underlying motivations

Those professionals who worked on the front lines with sex offenders, however, such as criminal investigators, clinicians who treat sex offenders, and probation and parole officers, quickly learned this conceptualisation did not fit most of the offenders with whom they interacted. They realised the "groups" were simply based on the crime that had been detected by law enforcement and not on the offenders' true criminal offense histories. Once they asked the offenders about undiscovered crimes it became obvious that the majority of so-called "online offenders" were, in fact, undetected hands-on abusers, and many convicted child molesters also possessed child abuse images on their computers.

In other words, looking at child abuse material and sexually abusing children are adjunctive crimes they are different manifestations of the same underlying motivations or drives. Given that both crimes are "fuelled" by a sexual interest in

children, the commission of each crime appears attributable to access and opportunity. Yet it is still not uncommon to hear arguments and read studies that describe differences between "hands-on" and "hands-off" offenders. In spite of several studies proving these conceptualisations to be fundamentally flawed, the myth is still alive.

Not a mitigating factor

Let's look at the other notion – that looking at images serves as a mitigating factor. The first thing we have to recognise is this premise completely goes against basic psychology. In psychology, behaviours that are reinforcing (i.e., provide physical pleasure, satisfy an urge, cause relaxation) will maintain or increase the frequency of the associated behaviour. Thus. instead of mitigating urges, the viewing of child sexual abuse images will strengthen urges and enhance the fantasies. Child abuse images, like "adult" pornography, are designed to make fantasies seem more real. In the case of child abuse imagery, making those fantasies more "real" is precisely what we want to avoid.

60-86 per cent correlation

A number of studies have looked at the correlation between looking at child sexual abuse material and hands-on abuse. Michael C Seto. a Canadian forensic psychologist and author, is one of the most recognised researchers on paedophilia and sexual offenses committed against children. In his meta-analysis, a study that combines the results from all studies within a given subject - he found that more than 50 per cent, and probably closer to 60 per cent, of those who consume child sexual abuse material also commit handson offenses against children. This estimate may be low since a

significant amount of sexual abuse goes unreported.

In a study from 2014 (Bourke et al., "The use of tactical polygraph with sex offenders") 57.5 per cent of those in the study who had been arrested for a child pornography offense also admitted hands-on sexual abuse of children. This information was obtained at the time of arrest. and since any admissions could be used against the offenders in court proceedings, the researchers assume the percentage was an underestimate of the true correlation. The study was replicated in 2016 (DeLisi et al., "The dark figure of sexual offending: New evidence from federal sex offenders") and in that study 69 per cent of the offenders self-reported contact sexual offences.

An even higher number was shown in "The Butner Study Redux: A report of the Incidence of Hands-on Child Victimization by Child Pornography Offenders" (Bourke & Hernandez, 2008). The researchers looked at a population of sex offenders within a voluntary, prison-based treatment programme, and found a crossover of 85 per cent and an average of 13 victims per offender. At the time the paper was published there was criticism that the numbers seemed too high; the research was methodologically sound, however, and subsequent studies appear to support the "Butner Redux" paper's findings.

In short, the idea of a "harmless" hands-off abuser is a myth. The studies show there is a high, if not very high, correlation between looking at child sexual abuse material and contact sexual offenses against children.

THANK YOU FOR CARING!

There are times when the most difficult subjects to talk about are also the most important. Child sexual abuse is one of them. Even though it may feel difficult, we need to have the courage to see this problem and see the children it affects. If we have the courage to see, we also have the courage to act, and when we act there is hope.

Through collaboration, law enforcement, decision makers, NGO's, public sector organisations, companies and individuals, can make a difference and save children. We know that today we are already saving thousands of children.

Together we can do more!

