

From: [REDACTED] (HOME)
Sent: mercredi 8 avril 2020 18:42
To: [REDACTED] (HOME)
Cc: [REDACTED]
Subject: Flash report - calls with Microsoft on PhotoDNA (technical update) and upcoming EUIF activities on the fight against CSA, 6 April

Dear [REDACTED]

Please find below the notes of the call with Microsoft last Monday, with thanks to [REDACTED]

Three main takeaways for me:

- [REDACTED]
- [REDACTED]
- [REDACTED]

Best regards,

[REDACTED]

From: [REDACTED]
Sent: Wednesday, April 8, 2020 1:52 PM
To: [REDACTED]
Subject: RE: Can you please take notes?

Dear [REDACTED]

Below please find the notes from yesterday's calls with Microsoft for your overview and inclusions.

Many thanks

[REDACTED]

Call objective: Two consecutive calls were held yesterday with Microsoft. The objectives of the calls were to obtain from Microsoft a technical update on the workings of Photo DNA and to provide Microsoft with information on the expert workshop on encryption that took place on the 23 March, and invite them to the second meeting in this process.

Participants included: European Commission: [REDACTED]

Microsoft:

- [REDACTED]

[REDACTED]

Salient Points:

On PhotoDNA technology:

- PhotoDNA is a hashing technology that allows for a ‘fuzzy match’ (i.e. not an exact match of the image). This aims to allow for detection of all images, including those that have been slightly modified by perpetrators in an attempt to avoid detection. In technical terms, PhotoDNA works by taking a unique signature (hash) of the image (a thumbprint, which can also be slightly blurred) and matching to a database of hashes of known CSAI. This is done by reducing the picture to a black-and-white contrast, re-sizing it, breaking it up into a grid and looking for intensities of gradients and edges. It is a method that has proven resistant to alterations done by perpetrators to the original image.

[REDACTED]

- PhotoDNA is freely downloadable through Microsoft after vetting and has been the foundational technology utilized by law enforcement and other competent authorities for the past 10 years.
- Microsoft works with a number of NGOs, including NCMEC & IWF and fellow industry partners to share the hashes discovered, creating a trusted source of hashes. That hash database is made available to companies, and other entities that have that have a relationship with the dataset providers. PhotoDNA technology is then used to hash images on their systems and their servers and then a comparison takes place between the hashes generated by the companies and entities and the hash database provided by Microsoft, to identify CSAI.
- The hashing, and comparison is done in fractions of seconds, despite the growing size of the database of hashes of verified CSAI.
- The technology is very robust and has a very low false-positive rate as long as the quality of hashes is high. Moreover, Microsoft has increased its capabilities by a 10X by changing the comparison algorithm used, and tweaked the technological approach to how PhotoDNA is used to keep it relevant.

Plans for new developments in relation to PhotoDNA:

- There are three challenges to continuing to use PhotoDNA going forward:
 - o How to scale the technology to continue to meet the demands of customers, given the increasing volumes of content
 - o The change in landscape of content- gone from images, to videos, to live-streaming becoming more common