

1) Introduction

Dear colleagues and distinguished guest. I am honoured to be given the opportunity to speak on this subject, which is of great importance in this digital time and age. I would also like to thank the previous speakers for interesting presentations.

In my presentation, I want to share what I learned from tracing, seizing and freezing crypto currency as head of a recent Swedish investigation regarding the drug marketplace Flugsvamp 2.0.

For more than 2 years we have all been affected by the pandemic. Well, this case has been going on since 2018. It has affected me in more ways than the pandemic, and for a longer time and is still not over. My hope is to give something to you, about my experience, the challenges I met in this investigation and how they were overcome.

2) Flugsvamp

The second version of the online market-place Flugsvamp (the Swedish word for the *mushroom agaric*) was launched in April of 2015. It offered a meeting place on TOR network for the Swedish drug market and provided an escrow service for bitcoin payments.

The 17th of June 2022, the Svea court of Appeals in Stockholm ruled that the Swedish citizen AG was the sole administrator of the marketplace for its whole lifetime of 3 1/2 years. Thereby, AG was deemed responsible for each unique drug transfer on the marketplace, conservatively estimated at around 311 000. The estimated turnover for this criminal enterprise was 49 000 BTC and the profit for AG, 3% of every purchase, amounted to 1 479 BTC in total.

AG was convicted for *Particularly gross narcotics offence* and *gross money laundering of the profit* and other crimes, sentenced to 11 years and 8 months in jail. A severe sentence in Sweden.

The case is pending since AG has appealed to The Supreme court. On a side note - he left Sweden before the last day of the trial and became a citizen in Turkey where he now lives and have full access to his earnings.

3) Legal Challenges

The Flugsvamp case illustrate some of the legal challenges we meet in these cases.

The properties of CC as digital information; immaterial and virtual by nature and cannot be **seized** in the Swedish definition of the word, since it's a) not an item and b) can exist in many places at the same time. However, there are ways to **secure** assets in CC, for forfeiture.

Since our national laws are written for traditional (fiat) money, in regards of seizing, forfeiture and sequestration, prosecutors must navigate with old maps in this new terrain. In order to increase the number of cases with forfeiture, and updated legislation is needed.

In a wider legal perspective, the anti-money laundering legislation addresses virtual currencies, but does not apply to all actors in the crypto market. We have also learned that some actors are simply neither compliant nor cooperative in investigations.

4) Practical challenges

I would like to address three main practical challenges in our investigations.

Firstly: These investigations require resources and expertise within prosecution and law enforcement agencies. Investigation teams must combine traditional police competence with analysts, it- forensics specialists and financial investigators.

Secondly: the tracing of transactions is the back bone in these investigations. For this, data from exchanges and other actors in the crypto market is crucial.

I would like to illustrate this with an example from Flugsvamp and then come back to the **third, how to present the evidence in court.**

5) Tracing transactions

Software known as blockchain explorers can collect and analyse large amounts of information and produce informative charts, such as this, showing one part of the money laundering in the Flugsvamp case.

The money flow starts from Flugsvamp, following a path through a large number of temporary accounts and wallets (dots and circles), merging with other funds from the same origin, ending up in the suspects own bank account, a few days/hours from the first transaction. No other coins were added along the way – a closed circuit.

Looking at the transaction pattern, it is clear that there is no other explanation for these frequent transactions, other than to make tracing difficult.

The chart also illustrate that bitcoin transactions are not in fact anonymous. The customer information retrieved from exchanges and other actors in the crypto market, such as email addresses, IP-addresses etc, connected the dots and lead the investigation forward.

So we know that a successfull tracing can show the criminal scheme, lead to assets that can be secured, and most importantly, identities behind the transactions.

6) international cooperation

The internet knows no borders. In these investigations, the international network is needed to get things done. I requested evidence from 25 different countries and worked closely with Europe's Police Organization (Europol). Working internationally is the only way the tracing can be done.

7) The Courts

The challenge for the prosecutor is to present the case and the evidence in court.

Doing this, we must never assume that judges possess previous knowledge in a new and complex area such as this. In my experience, this kind of digital evidence is very challenging to present and to make understandable for the court. A piece of evidence - even one that the police and prosecutor consider a virtual smoking gun - will not be valued highly if the court does not understand what it is and what it means. What I learned is that this was a great case, but we lost it in the first instance. We failed to

show how good the evidence was. We must teach the court, say it many times, in different words and be patient. Don't rush it. Timelines and charts are a great help. Since not only technology but also the terminology is new to the court, a case glossary can be produced, to help educate the members.

Take help from police staff with presentations.

8) Securing crypto assets

As mentioned, assets in crypto currencies can be secured in an investigation.

With the use of private keys, recovery seeds (mnemonic phrase) or passwords, the balance in a criminal wallet (hardware or software) within our jurisdiction can be transferred to a police wallet.

We can rely on our international agreement to secure assets without our jurisdiction. A custodian wallet safeguards the private keys on behalf of its customers, and hold, store and transfer virtual currencies, just like a bank. Such assets outside Swedish jurisdiction can be secured with a freezing order to the country where the provider is based. The transfer from a third party is affected at the time of the forfeiture which in Sweden is when the verdict is no longer appealable.

9) Conclusions

We hope that the Flugsvamp case will be as success in the end, but what have we learned along the way is that by using information from exchangers and other actors in the crypto market, suspects can be identified and crypto currency assets can be retrieved and confiscated as criminal profit.

10) Key success factors

To succeed, it takes resources, international co-operation and time.

Investigations like this are ultimately a team effort. The team must work the case together with the prosecutor and have a variety of expertise, combining traditional police competence with analysts, it-forensics specialists and financial investigators. Prosecutors also need expertise. As head of such an investigation team, the prosecutor will get educated along the way.

Secondly - It also takes close co-operation with other countries and international agencies. We are all in the same boat here and can help each other.

Last but not least; Endurance and patience. These investigations are very demanding, but we all must adapt to changes in criminal behaviour, mustn't we.

With this I leave the floor to the next speaker and hope that you have found the presentation interesting. I am open for questions if there is time.