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USE CASE

Crystal™ Counteracts Corruption

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The Issue

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To combat conflicts of interest and corruption, many countries require their public officials to provide declarations of income. These declarations of income often include information about their salaries, real estate holdings, shares/investments and liabilities. Cryptocurrency ownership should also be declared, as it is an increasingly valuable asset. However, verifying the amount of funds someone has using the Bitcoin Blockchain is difficult—as is determining relationships between addresses. To combat corruption, officials must be able to verify not only the amount of cryptocurrency, but also where the funds originated.

Crystal can help investigators identify and trace these activities. Below are a few examples of how **Crystal** can be used to verify cryptocurrency holdings for public officials.

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Income Tax Declaration

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Situation: A member of parliament indicates a purchase of 153 bitcoins on his declaration of income. With the help of **Crystal**, an auditor can confirm that the operation has taken place, the wallet address of the official can be verified, and further transactions can be investigated.

Crystal enables you to track all transactions of a particular entity—for example, a member of parliament. In this case, an auditor can determine other undeclared amounts of cryptocurrency belonging to the official. The official can also find connections between the official and suspicious entities. For example, **Crystal** could determine if any of the bitcoin belonging to the official came through the Silk Road, a famous dark net marketplace.

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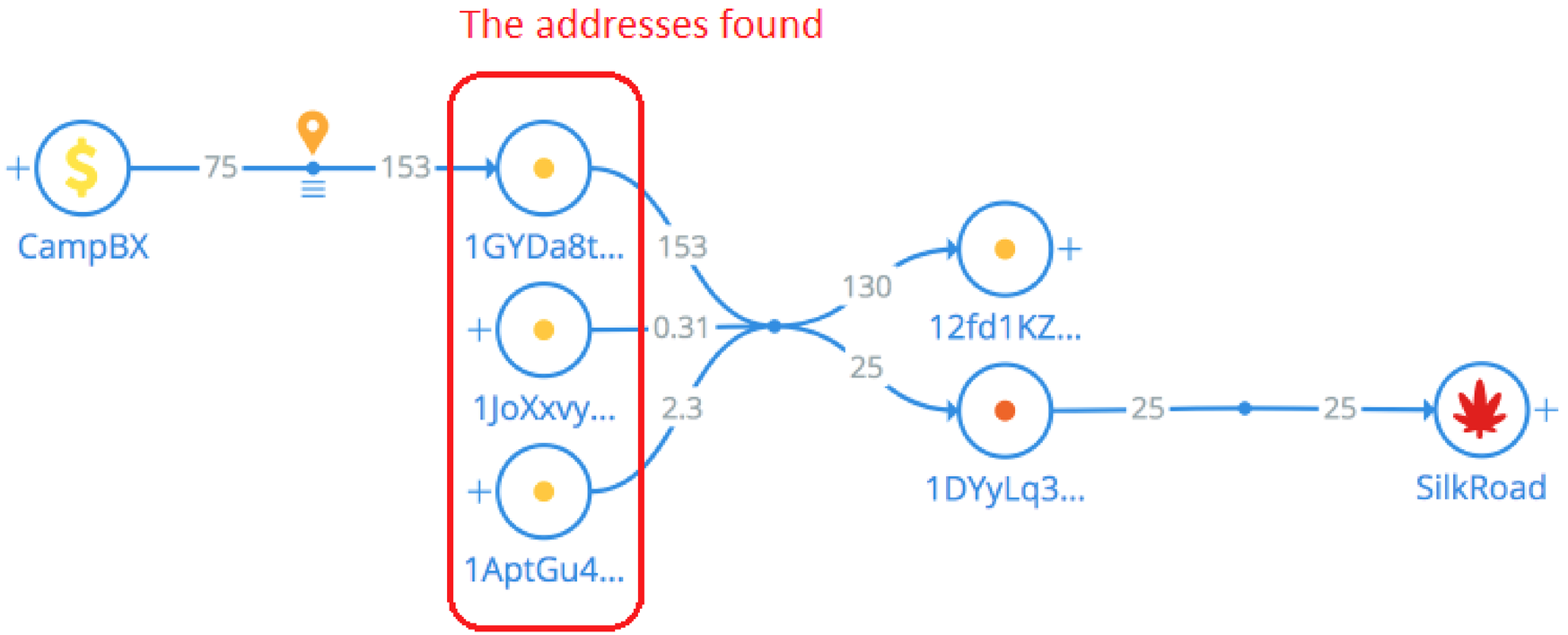

The picture above demonstrates a part of **Crystal** visualization graph for the bitcoin wallets in question and explains how an investigator can determine connections to the Silk Road.

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Tool Set

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Using basic information about a bitcoin transaction, an investigator can use **Crystal** to find a wealth of other information, including:

- The address of a person's bitcoin wallet.
- The amount of received cryptocurrency.
- A source of the cryptocurrency, such as its source account name, origin of the cryptocurrency, etc.
- Total amount of cryptocurrency at the specified cryptowallet.
- A list of all cryptowallets of the entity and related entities.
- Destinations, amounts and recipients of bitcoin transactions.
- A list of all Bitcoin Blockchain participants that the entity transacted with.
- Current location of cryptocurrency transacted via any of the wallets, up to the point of money withdrawal.
- Evidence of connections of the entity to dark markets using **Crystal's** risk score estimation.

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About Crystal

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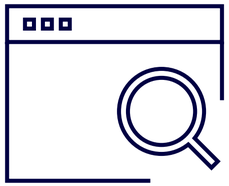
Crystal is the all-in-one blockchain investigative tool for law enforcement. As public blockchains and cryptocurrencies become more widely used, a broader set of tools is needed to track criminal behavior. Powered by the expertise of the Bitfury Group, **Crystal** can:

- Help investigators identify and track criminal activities, like ransomware payments.
- Link pseudonymous bitcoin payments to real-word entities, including exchanges, individuals and mixer services and reveal the real-world names of those entities in a user-friendly format.
- Identify ownership of bitcoin wallets and the interaction of different Blockchain entities.
- Provide substantial evidence for legal pursuance of charges.



Crystal is available as a web application, but can also be deployed on internal servers for added privacy.

You can find more information on **Crystal** at: **crystalblockchain.com**

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Crystal is the result of two years of development by the Bitfury Group's software team, consisting of world-class blockchain analysts, award-winning mathematicians and professional software developers—united by the idea of leveraging blockchain technology to build a better, safer future. We have been turning this idea into a reality, designing best-in-class blockchain solutions for people all around the world.

Founded in 2011, the Bitfury Group is the leading full service blockchain technology company and one of the largest private infrastructure providers in the blockchain ecosystem. The Bitfury Group develops and delivers both the software and the hardware solutions necessary for businesses, governments, organizations and individuals to securely move an asset across the blockchain. The expertise of the Bitfury Group ensures successful, easy, fast, secure and cost-effective connectivity to the blockchain. The Bitfury Group is a global team of experts in technology, business, communications, security and civil society.

The Bitfury Group believes the blockchain can and will open new doors for global economic opportunity and prosperity, and its mission is to create and advance blockchain applications that will further promote innovation and the advancement of the peer-to peer economy.

Company's website: **bitfury.com**

You can find us on Twitter: **@BitfuryGroup**

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