

## **Random X - Voice-Over and Script**

**[1]** Proof of work is a consensus mechanism where miners use computer processors to solve hashes to secure the network and have the potential to earn block rewards. While this is intended to be decentralized, if left unchecked, it is prone to centralization due to the manufacturing of specialized processors, known as ASICs.

**[2]** ASICs are produced by a small handful of companies and have a significant advantage over commodity hardware, such as CPUs. They are built solely to mine a specific cryptographic algorithm, meaning they greatly outperform commodity hardware and dominate the hash rate.

**[3]** This allows mining cartels to form, which either sell the latest ASIC model to the highest bidder or use their model on their own to make use of their better-performing technology

**[4]** before selling it to the secondary market.

**[5]** The centralization of ASIC companies can even be targeted by the government through regulations for green energy and compliance with sanctions.

**[6]** In response to this, Monero has developed Random X, a truly decentralized proof-of-work algorithm that is ASIC-resistant. Random X achieves ASIC resistance by utilizing random code execution and several memory-heavy techniques that complement a CPU's general-purpose capabilities. The dynamic, unique programs that are generated with Random X dissuade ASIC chips because of the ASIC's single-purpose design and are further frustrated by the increase in costs associated with adding more RAM. Launched in 2019, Random X has proven its value as the network has not experienced any ASICs in that period.

Random X is prioritized for CPUs, meaning anybody with a computer can mine Monero right now, mirroring Satoshi's vision of one CPU equaling one vote.

**[7]** Unlike ASICs, you can go to a local store and purchase the hardware to mine Monero.

**[8]** Your Monero miner can also function as your everyday personal computer, gaming device, home entertainment system, and

**[9]** can even be used as a heating source during the winter months.

Visit [getmonero.org](https://getmonero.org), download a wallet, and start mining Monero today!

## **Random X - Visual Storyboard:**

**[1]** In the tail emission video, The miners that we showed are using the tool on the wall to mine Bitcoin. We will use this as a reference but in the opening of the video show it on a larger scale (to show more miners). We will have a large wall of sediment that we are observing being worked on by miners.

**[2]** Next, we show the Bitcoin ASIC, represented by mining excavators in different colors, representing different mining companies ([https://www.youtube.com/watch?v=HX\\_O61G66nA](https://www.youtube.com/watch?v=HX_O61G66nA)). The excavator, much larger than the collection of humans (these are going to represent CPUs), is noticeably digging into the wall of sediment at a much higher volume than the humans, rendering the humans as pointless extras.

**[3]** We now reshoot the mine and only ASICs are left

**[4]** A quick cut shows the (now sold excavator) mining Bitcoin fruitlessly compared to a new, much larger excavator in a different color (representing a new company or ASIC model) that was created by the ASIC company.

**[5]** Show a document labeled “OFAC SANCTION– DO NOT APPROVE TRANSACTIONS FROM THIS ADDRESS”

**[6]** Random X will be the same mining sediment wall as before, but with one key difference: The “minable sediment” will jump to different parts of the wall (signified by an orange shade. The shade will appear in the bottom left, then move to the right, and we can even show it in the high part of the wall (forcing the miners to climb up using ropes). Because the people (CPUs) have the capability to move around much faster than the excavators, they are able to accomplish these tasks. Meanwhile, the ASIC will be shown (very slowly) moving to try to keep up with the CPUs, but is unable to.

**[7]** Showing a person buying a computer at a store

**[8]** Showing said person at desk enjoying his computer

**[9]** Showing a person lying in bed (very comfy) next to his miner with heat emitting from it

**[10]** As a last visual trick, we will zoom in on the computer and briefly go back to scene 6 which shows a single CPU mining the wall.