**【UNITALK: THE BOY GENIUS: VITALIK BUTERIN】**

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What did you do when you were 19 years old?

The followings are the achievements that a Russian Canadian gain for four years since he was 19 years old:

* Co-founder of the <Bitcoin Magazine>
* The youngest candidate of 【40 Under 40】of Forbes
* Founder of Ethereum, the world’s second-most valuable cryptocurrency network behind Bitcoin

We are honored to interview this “boy genius” founder of Ethereum, Vitalik Buterin, and introduce his life story with our audience.

From the beginning of the 2011, Vitalik first heard about the bitcoin from his father. It was also the time when Bitcoin got people’s attention for the first time. In order to further explore the ‘Bitcoin’, Vitalik immediately went onto the bitcoin forums, and found someone who was willing to pay him 5 BTC (then 4 USD) per article on the forums. He therefore gained his first 20 BTC, and started his first life career with Bitcoin Magazine as a blog author (Blog Link: <https://bitcoinmagazine.com/authors/vitalik-buterin/>)

Gradually, Vitalik found his interests in the Blockchain. He explained that “*I was excited by the idea that a community of a few thousand people just like myself with computers just like my own could independently create an entire new financial system from the scratch, without relying on any existing institutions or intermediaries*.”

In 2013, Vitalik went to the University of Waterloo, but he still took almost the full-time working for his bitcoin project, like what he said: “*I realized that this was a once in a lifetime opportunity to do something interesting。*” Interests create the miracles. By noticing the life-long interests, he decided to devote his full efforts to the industry.

Like Steve Jobs, the founder of the Apple, Vitalik decided to take a term off from the University and spent all of his time traveling around the world. Working on the project, while interacting with other people in the industry.

After four months of travelling, Vitalik met several teams working on the next-generation applications through the Blockchain technology in Israel, going beyond the bitcoin. He soon realized that the direction they analyzed at the time was appealing, but the projects were not sufficiently powerful for the job.

*“The common approach at the time was to create a protocol that would have several transaction types, with one or two transaction types for each application. I came up with the more generalized approach of creating a Blockchain with a general-purpose built-in programming language.”* Vitalik said.

Therefore, based on his ideas, Vitalik established his first Non-for-Profit Organization, “Ethereum”, and wrote the white paper （<http://www.linktimetech.com/%E4%BB%A5%E5%A4%AA%E5%9D%8A%E7%99%BD%E7%9A%AE%E4%B9%A6-Ethereum.pdf>） for the organization. He emailed his paper to several friends, and those friends sent over to their friends. After a month, the initial Ethereum team was formulized.

As the Ethereum was first heard by the world, it works as the world’s second-most valuable cryptocurrency network behind the Bitcoin, with numerous attention and interests. When we asked why did he set Ethereum as the form of the Non-for- Profit organization instead of the for-profit organization, he said:

*“I thought it was important that the Ethereum was a neutral project created for the benefit of the whole world that would not be owned or built to enrich a small group of people.”*

Also, when he answered the question of the changes of the Ethereum, if he can start all over again, he said:

*“I would change some technical details, like making the protocol more parallelization-friendly from the start, and I would change how I created and managed the team from the start but otherwise I would not have changed the core vision.”*

As he stated the core values that he put in the Ethereum: to benefit the whole world and to make the world a better place, Ethereum will become a brilliant idea to develop and grow.

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1. Q: What are the difficulties that the Ethereum need to solve so far? What are the future needs?

A: The main challenges are technical, and break down into three categories:

\* Scalability - increasing the capacity of the blockchain in terms of raw transactions per second. Currently ethereum can do ~6 per sec, but achieving mainstream adoption will require thousands of times more.

\* Privacy - it should be possible to use blockchain applications without revealing all of one's private data.

\* Security - risk of getting one's funds stolen, losing one's private keys, bugs in smart contract code, etc should be greatly reduced.

2. Q: After the DAO hack, what implementation did you do to keep the high quality blockchain ecosystem in Ethereum

A: We greatly increased our emphasis on promoting good coding practices, improving security through formal verification, and adding programming language features to make it easier to write secure code. Also, I think that developers of similarly complex projects today are much more careful before putting large quantities of money into their contracts.

3. Q: What is Ethereum going to do to incentivize miners to support the network when it moves over to a proof of stake consensus algorithm, as there is economic reasons for them to continue supporting the chain with the old proof of work algorithm.

A: The transition from PoW to PoS will be gradual. If miners fork off at some point to continue supporting a PoW chain (and implement a hard fork to delay the difficulty ice age) then there will obviously be a third "flavor" of ethereum along with ETH and ETC. I think that this is not likely to happen, because miners will simply stick with ETC (as well as other things like Zcash instead). Miners that have earned enough ETH may also choose to become validators in our proof of stake system, or "mine" for ethereum-based second-layer systems like Golem.

4. Q： How do you think about the NEO？ Would you think Neo become a strong competitor of Ethereum in China?

A： NEO is clearly taking a route focused on institutional acceptance in China specifically, and so it will depend heavily on the applications that it finds and economic and political trends there. Ethereum is a global public platform that is designed for maximum diversity, targeting both big and small developers, across all industries, so even if NEO establishes itself in one market there is always lots more space for Ethereum to prosper.

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1. Q: What are those new startup companies go in the future? Any advice for them to be sustainable?

A: I think it is most important for projects to pick one specific area where they can provide real value and are in a better position to provide that value than any other project, and focus on that. For example, despite clear market demand, we \*still\* do not have any widely available easy-to-use ERC20 tokens that are backed by physical assets (eg. gold, fiat currencies, other raw materials). Many projects that try to do this also go on to make very complex plans around making a DAO, making a very complex private chain for high-speed trading, etc, not realizing that all the market wants is a simple ERC20 token. The business can create the gold-backed token, other people in the ethereum ecosystem are already coming up with more and better ways to trade it, including second-layer scalability solutions. Ethereum is fundamentally about a community that builds different things that work together with each other, not everyone trying to create their own personal empire where they try to build an entire ecosystem like Wechat.

If you are making a token, make a token, and build it in a standard way so that it supports all wallets and trading systems. If you are making a wallet, build it in a standard way so that it supports all tokens. If you are making a scalable payments solution (eg. like Raiden or Plasma), build it in a standard way so that it supports all tokens, and ideally expand it to other applications as well. Everyone should focus on their own piece of the ecosystem, this way we have the least duplication of effort, and we can all help each other prosper.

2. Q: Which industry/business do you think will have the better connection with the blockchain technology?

A： Finance will continue to be important; aside from this, supply chain tracking, digital identity management, digital assets such as loyalty points, in-game assets, etc, some government applications, and many smaller applications scattered across many industries.

3. Q： In terms of the public chain and private chain, which chain has more potential? Any thoughts on it?

I see private chains as having real value in the short term in part as scalability solutions, as well as solving issues like privacy, and allowing applications to be more easily modified during development. In the long term, we hope that the public chain will be scalable enough for the majority of use cases, so we do recognize that some will continue to make more sense as private or consortium chains.