

## Surprise AMA 11-21-2019

On November 21st Charles Hoskinson sat down for a [surprise AMA](#) during his time in Dubai. There he discussed the upcoming incentivized testnet snapshot as well as Cardano plans for 2020. If you would like to see the notes from his previous update on November 12th, click [here](#).

### SUMMARY

- **The balance check snapshot has been successful and major bugs have been identified and fixed.**
- **The Incentivized Testnet snapshot will likely occur before the end of November. An announcement of the official date should be expected either Friday of this week or Monday of next.**
- **A workshop will be held in Colorado in the beginning of December to lay out the Cardano roadmap for 2020.**
- **Charles is meeting with the Cardano Foundation to address the formation of a Cardano Improvement Proposal (CIP) committee.**
- **New technologies like recursive snarks and Halo are currently being studied.**

### Successful balance check

The balance check snapshot was successfully implemented. There were some expected issues for both IOHK and users. One of the main difficulties was a discrepancy in funds after restoring on Daedalus. This was due to a bad implementation of the HD wallet code in 2017. The bug was fixed in March of 2018. The new wallet backend was implemented correctly with current standards but developers weren't aware of this legacy bug. This meant that if someone had funds in a wallet beyond March of 2018 they would have no problem with their balance check restore. Because of our strict implementation if users had funds stored in a wallet from the time period of the bug, it would not generate addresses outside of the indexes. This meant that while funds were in the UTXO, they would not appear on the balance check. This has now been fixed and the issue is fully resolved.

Yoroi was a bit more permissive. It allowed people to regenerate older indexes. This meant that some people were able to see the correct balance from Yoroi but the incorrect balance with the new wallet backend. Therefore, if you see an incorrect balance in Daedalus, check in Yoroi to see the correct balance and the newly issued patch should solve the discrepancy for you. We also encountered some lingering inter process communication issues between the Jörmungandr node, the wallet backend, and Daedalus on windows. This was expected and we have mostly resolved it by this point. We plan on continuing to chip away at all of these problems.

We got a great deal of support tickets as anticipated. Some were conceptual and some were bugs. Overall, the balance check has been an overwhelming success. We thank the community for their constant participation.

### When will the snapshot happen?

Tentatively, we are looking good to have the snapshot next week. We will announce the exact date as we get closer, likely this Friday or Monday. If the announcement is made next week we hope it will be in the earlier part of the week but it might be later. The biggest challenge is getting everything to work well together. We needed Daedalus to work with the new wallet backend and Jörmungandr. We accomplished that with the balance check snapshot. Now, it's a matter of integrating incentives code as well as dealing with some breaking changes due to format alterations. We believe there is a high probability of getting the Incentivized Testnet snapshot by the end of the month.

### **Building quickly**

Software is looking good and we are happy with the current velocity. We have added a new team member to the Jörmungandr team. He is currently making good commits and adding a great deal of value. We are also in the process of adding two or three new team members. The Hydra team is going to be activated by Basho soon led by Rob Cohen. He is going to be starting a prototype implementation after November 30th. On top of that he will be writing a great deal of blog posts about Ouroboros. This will include everything from how it works to explaining the various flavors of Ouroboros. They will also deal with how Ouroboros resolves common problems in the PoS world like *nothing at stake* and *long range attacks*. Look for those articles on the IOHK blog.

### **Cardano 2020**

We are also holding a major Cardano workshop in Colorado from December 2nd to the 4th. This will be the post-Incentivized Testnet workshop where we will consolidate everything we have learned. One major topic will be the 2020 roadmap. Another important point will be potentially shipping Goguen at the same time as Shelley. Right now, we are trying to see if this is feasible or not. With our velocity on the Rust side, we're optimistic that those things are not too far apart from one another.

Moving forward we're bringing new team members on and we've altered the structure of how teams operate. We have a much better delivery culture now and of course we have over 3000 supporters keeping our feet to the fire with the stakepool channel. For that we are always grateful.

Our hope is that Basho will closely follow Goguen. Depending on the implementation results from the Hydra prototype we will be able to figure out where that fits into our roadmap. The final step is Voltaire which is all about governance. Soon, a meeting will be held in Switzerland to address the Cardano Foundation about the formation of a CIP committee. This is a committee which would deal with the Cardano Improvement Proposal process.

### **The Cardano Improvement Process**

The first formal CIP process will be created through Emurgo, IOHK, and the Cardano Foundation. Contained within the first edition there will be a way for people to use the CIP process to change the CIP process itself. Our hope is that Voltaire will be the first update to the

system which will entirely covered by CIPs instead of our project management implementation. Keep an eye out for announcements from IOHK and the CF. As always, we hope that the community will participate in terms of advice and open source contributions.

Voltaire will include a built-in voting system for Cardano which will be used for the treasury as well as a discussion about updates to the protocol. The standard language referencing these things will be a CIP. The simplest way to do this is to draft the CIP then store it in a deterministic way. It will then be hashed which will allow people to vote on the hashes of which improvements they want to implement. We do not plan on making Voltaire announcements until Q2 of 2020.

The CIP process alongside the treasury will be used to create a funding contract for IOHK to continue its work on Cardano post 2020. This will be a strong dry run of the system. We're looking forward to next year because it will see a great deal of releases making us more feature rich.

### **New Tech**

We are also looking to new technologies like recursive snarks and Halo. We have a team dissecting these technologies and looking into them as the ultimate client solution. We are also interested in thinking around transactions. We have previously talked about Cardano as a financial operating system for those without one. To that end we had to take a deep dive into understanding transactions. Transactions have five properties, assets, actors, metadata, the regulatory side, and then the contractual component. We believe that great technology needs to be involved in each of these facets.

In terms of Cardano, DIDs can help with identity. Smart contracts can work with transactions. Creating a multi-currency ledger allows us to express arbitrary assets using hashing to express metadata. The regulatory side usually involves getting a sense of contingent settlement. This includes following KYC or AML regulations. Building these capabilities for Cardano is crucial for 2020. We want to solve this using templates rather than complex coding. We believe that this will help Cardano become the first cryptocurrency to bring a holistic solution end-to-end for all five categories of transactions. This will allow users to leverage the system seamlessly in full compliance with local regulations. Or, it can be used in a legacy mode to produce maximal autonomy and privacy.

### **Building a good software company**

We are excited about 2020. Over the last few years we have been learning to be a good software company. Some of this was experimentation with product development and management methodologies. Some of it was involved having to learn how to follow proper development processes. Research and formal methods often leads to a waterfall process. We needed to find a way to be agile regardless of the fact that we are somewhat trapped in a waterfall methodology given research dependency. Within the last six months we have learned a lot about becoming a good software company.

We are also happy to see that some of our research is coming to an end. After Hydra, Ouroboros is done in terms of Cardano. We are also looking forward to Ethereum interoperability which will be discussed during the Colorado summit. This will likely happen during the Basho Era. We will make an announcement of exactly how Ethereum support will happen in the future.

## QUESTIONS

[Will Cardano increase percentage of return on staking instead of keeping it at 2.5 percent?](#)

[Any updates on the students from the Haskell course?](#)

[Will Cardano have instant settlement like Algorand?](#)

[Is there a clear strategy to capture value into ada itself?](#)

[Have you bumped into Tone Vays?](#)

[Is there a connection between EU Horizons 2020 and Cardano?](#)

[IOHK Summit 2020?](#)

[Are you happy with the amount of testnet nodes?](#)

[What stops people from loading up their wallets with ada for the snapshot then selling it off after the beginning of the incentivized testnet?](#)

[Is Cardano going to be a member of the W3C?](#)

[Any update on the lab for dedicated hardware?](#)

[How is your physical and mental health?](#)

[Why do Daedalus and Yoroi use words rather than a private key?](#)

[How will we interact with a CIP?](#)

[Will IOHK also work on interoperability standards?](#)

[How do you maintain your sanity and focus?](#)

[How many patents does IOHK hold?](#)

[Any idea of how to handle issues when the owner of funds dies?](#)

[Is there a burn lockup of ada somewhere in the future?](#)

[What will happen with the price of ada?](#)

[What keeps you up at night honestly?](#)

[How are your five Lambos?](#)

[How is the ranch?](#)