



BCH Open-Source Pulse: Vol #7

Period ending 14/10/2019

This is the seventh edition of the BCH Pulse developer newsletter. Existing projects have been updated. We will now be moving to a bi-monthly publication. Submissions are due in by the 1st and 15th of each month. Information can be sent to the new email bch.dev.mail@gmail.com Thanks!

Here is some of the work that is being built on BCH by the Developers. This does not take into account work done by developers who chose to remain anonymous.

Developers ~

Chris Pacia - BCHD

Recently completed:

- *November 15 network upgrade features.
- *Bug fix: slow utxo state updating

Currently working on:

- *CF filter format changes.
- *Bug fix: slow utxo state updating

Josh Ellithorpe - BCHD

Recently completed:

- *November 15 network upgrade features.
- *Bug fix: slow utxo state updating

Currently working on:

- *Bug fix: mutex issue

Tyler Smith - BCHD

Currently working on:

- *Building out CI for BCHD
- *Working on a spec and first milestone release for a system that reconciles local node states using Avalanche

Jason Cox - Bitcoin ABC

Recently completed:

Currently working on:

- *Build infrastructure, deployments, and automation to support more rapid development

Future work:

- *RPC framework overhaul

Wants help with:

- *Backporting from Core: network code and unit tests
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Mark Lundberg - Bitcoin ABC

Recently completed:

*ABC implementation of November 15 network upgrade.

Currently working on:

*Implementing CashFusion.

Future work:

*Organization + planning for May 2020 upgrade.

Amaury Sechet - Bitcoin ABC

Recently completed:

*Improved DB management (+20% performance improvement).

Currently working on:

*Backporting from Core

*PSBT

*Improved HD wallet support

Wants help with:

*Backporting from Core

*Address indexer

*Bitcore-compatible RPCs

Andrew Stone - Bitcoin Unlimited

Recently completed:

*Getting Bitcoin Unlimited ready for the November network upgrade.

Recently completed:

*Implemented efficient Child-Pays-for-Parent algorithm for mining long unconfirmed chains

Currently working on:

*Double-spend proofs

Andrea Suisani - Bitcoin Unlimited

Recently completed:

*Getting Bitcoin Unlimited ready for the November network upgrade.

Currently working on:

*Backporting from Core: tx script parsing.

*Final polish of next BU release.

Future work:

*Starting work on the second iteration of the Gigablock testnet.



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Peter Tschipper - Bitcoin Unlimited

Recently completed:

*Implemented efficient Child-Pays-for-Parent algorithm for mining long unconfirmed chains

Currently working on:

*Double-spend proofs

George Bissias - Bitcoin Unlimited

Recently completed:

*Graphene-based mempool synchronization was recently merged to BitcoinUnlimited/dev. Initially this is an experimental feature that will allow participating nodes to limit the number of transaction-related invs that they send and engage in periodic bulk synchronization with each other. The hope is that mempools will be in better synchronization and overall bandwidth usage will be less.

Currently working on:

*More robust failure recovery for Graphene. Graphene blocks will fail to decode with some tunable frequency (roughly one per day). Currently, an Xthin or Compact block is requested whenever the Graphene block fails to decode. In this work, we will add a failure recovery mechanism to Graphene that leverages the data already sent to decode the block with minimal additional information from the sender. Details can be found here:

<https://people.cs.umass.edu/~gbiss/graphene.sigcomm.pdf>

Future work:

*Continue to develop improvements to the Graphene protocol.

*Secure funding to develop a prototype of the Bobtail protocol for Bitcoin Unlimited.

Justin Holmes - Bitcoin Unlimited

Recently completed:

*Initial trial implementation of a transaction rate graph embedded in the BU Qt client, part of the upcoming 1.7 release.

Future work:

*Usability improvements to the transaction rate graph.

dagurval - Bitcoin Unlimited

Recently completed:

*Blockstats RPC call ported to BU



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Tom Zander - Flowee The Hub

Currently working on:

*November protocol upgrade

Future work:

*More coverage of the bitcoin-proxy
*Further APIs

Wants help with:

*Schnorr multisig-based transactions for test (regtest based, preferably)
*Website translations

Joshua Green - Bitcoin Verde

Recently completed:

*Added node whitelist to prevent banning.
*Changed banning formula to be a bit more lenient.
*FIX: SPV Wallet now stores its own txns in DB (restarting the SPV wallet no longer visually “undoes” the txn)
*Bitcoin Verde now relays matching Mempool txns on upon setting a bloom filter.
*Fixed issue with db connection pool. (Thanks Xavier Kral)

Currently working on:

*Diagnosing memory leak during synchronization.
*Improving synchronization speed after 2014.

Future work:

*Releasing SPV wallet & library.
*Minor Explorer improvements.
*Working with Ellithorpe/Lundeberg/emergent_reasons on BCH Spec.

Jonathan Silverblood - Cashual Wallet

Recently completed:

*Proof-of-concept for automatic cloud backups for Cashual
*Proof-of-concept for local community in where2cash.

Currently working on:

*Adding geographically local community information to where2cash (meetups, groups, advocates).
*A fully non-custodial tip/pledge sustainable backing platform.
*Building adoption support community + tooling.

Future work:

*Rebuild Cashual on different libraries.
*Add feature to more easily update where2cash map data.
*Build a generic openstreetmap data extension platform to use as the backend for new where2cash features.



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Tendo Pein - Spedn

Recently completed:

*Spedn 0.2.0 alpha 1 which supports Schnorr multisig and array types + type aliases

Currently working on:

*Spedn documentation

Imaginary_Username - Electron Cash

Recently completed:

*November upgrade testnet. Connect and get a taste here:

https://github.com/bitcoincashorg/bitcoincash.org/blob/master/workgroups/wg-testing/2019-11-15_upgrade_testnet.md

Currently working on:

*Reusable address: Working closely with both bchd and Harry Barber for a layer on top of bitcoind. Prototype server: <https://github.com/hlb8122/prefix-server/tree/dev/grpc>

Future work:

*Assist with double-spend proof testing and implementation
*Investigate Avalanche and Storm preconsensus mechanisms

Wants help with:

*Reusable address: Wallet implementation!

*Any help from people who have any confidence in low-level transaction-making is greatly appreciated. Spec here: https://github.com/imaginaryusername/Reusable_specs/blob/master/reusable_addresses.md

Fernando Pelliccioni - Bitprim

Recently completed:

*Internal maintenance on the Bitprim node and in the APIs.

Current work:

*I am working on implementing the necessary changes so that Bitprim is suitable for the protocol changes that will be activated on November 15.

Future work:

*Improve the programmatic APIs of Bitprim, in particular the Javascript and Go-lang APIs. Having contributions for this would be great.

Gabriel Cardona - Bitcoin.com

Currently working on:

*BITBOX
*SLP
*REST
*Badger



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Chris Troutner - [Bitcoin.com](#)

Recently completed:

*Added SLP support to bch-cli-wallet: <https://www.npmjs.com/package/slp-cli-wallet>

*Bch-js v1.6.1 released

Currently working on:

*Adding the ability to sweep tokens off of an SLP paper wallet

Wants help with:

*SideShift.ai + Cryptophyl exchange integration into slp-cli-wallet

*Integrating AlwaysAnOn's CashShuffle JS library into slp-cli-wallet

Tobias Ruck - [SLPDEX](#)

Recently completed:

*Cashcontracts-rs, which makes working with transactions and contracts much simpler:

<https://github.com/slpdex/cashcontracts-rs>

Currently working on:

*Refactoring Cirrus (previously slpdexdb/cryptopandasdb) to be just a single component with interfaces:

<https://github.com/slpdex/cirrus>

*Experimenting with building a CashAssemblyinterpreter for Nimbus

Wants help with:

*async/await stuff for Nimbus (anyone who's a Rust developer could help) Feedback/review once a paper has been published

James Cramer - [SLPDB / Electron Cash SLP](#)

Recently completed:

*Added telemetry for SLPDB instances: status.slpdb.io

*Improved SLPDB handling of double spends

Currently working on:

*Working on graph search updates for Electron Cash SLP

*Working with Calin Culianu to merge SLP into mainline Electron Cash

Future work:

*SLPDB improvements and upgrades, including transactional DB updates in order to allow graph search to work properly

*Improved logging facilities for SLPDB

Jonald Fyookball - [Electron Cash](#)

Currently working on:

*CashFusion

Pokkst - [Crescent Cash](#)

Recently completed:

*Tipbitcoin.cash rewrite with new frontend and site using PHP.



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Rosco Kalis - CashScript

Recently completed:

*CashScript v2.0 which includes a 30% average optimization in bytes and opcount. It also includes an integration of Tobias' CashProof project which is a better way of enforcing compiler versions and security fixes.

Currently working on:

*At DevCon talking with Ethereum devs and trying to raise some awareness of BCH projects.

Future work:

*Adding support for Schnorr multisig and full browser support for the CashScript SDK.
*Setting up better first class support for covenants and for SLP

AlwaysAnOn - CashShuffle

Wants help with:

*CashShuffle library unit tests and performance audit

Shammah Chancellor - CashWeb Keyserver

Currently working on:

*CashWeb Keyserver

No submission this issue -

Antony Zegers - Bitcoin ABC

Axel Gembe - Electron Cash

Calin Culianu - Electron Cash

Jason Dreyzehner - Bitauth

Karol Trzeszczkowski - Electron Cash Plugins

We invite **any developer** (working on BCH) who isn't featured in this issue to self report / submit what you are working on for the next issue of BCH Open-Source Pulse.

We're looking for:

*Recently completed

*Current work

*Future work (stuff you'd like to get to after you're done with your current work)

*Anything you'd like some help with

Please email us at bch.dev.mail@gmail.com