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Electrum SIG Meeting Minutes 2021-05-12
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1.  Current status -- electrum sever and client, problem on testnet with some blocks
2.  Discussion: remaining work needed for a first release
3.  Test requirements -- what to test and how


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-The electrum client now has a server-side asset database in addition to the transaction database


-Currently, the client gui supports displaying assets but not acting on them


-Most work this week has been on the electrumx server
        -the server is reverse compatible: the asset-aware server works with the asset-aware client, but also with t
he old non-asset client
        -the server/client protocol has been extended with new asset commands. This still needs to be documented
        -the client can ask the server (pull) for asset data; it can also subscribe to data for an asset so that it
gets pushed


-The new server implementation has had to be patched to prevent hang due to some malformed coinbase mining transacti
ons on testnet
        -eg: txid=f90dccc9d1b40230b4b6eddcdc543f0cad4a3771e51a7a57dccced959adc563a
        -rawtransaction: 020000000001010000000000000000000000000000000000000000000000000000000000000000ffffffff
                        2b03a0d30204345a4b5e686f6e676b6f6e672f7777772e6f6b65782e636f6d2f01000000000000000000000000ffff
ffff
                        020088526a7400000000000000000000000000266a24aa21a9ede2f61c3f71d1defd3fa999dfa36953755c69068979
9962b48bebd836974e8cf9012
                        0000000000000000000000000000000000000000000000000000000000000000000000000000000000
        -these transactions burn the coinbase mining reward by failing to provide a destination address


-There was some question of Electrum BIP39 and BIP44 support. Electrum supports BIP39. But it uses a custom seed phr
ase algo (not BIP44).
        -That has always been the case with Electrum
        -This may be changed later to support BIP44


-There is support for the servers to do peering without the need for a peer list. This needs to be tested.


-There is currently some concern that there may be memory leaks in the asset support code
        -This needs additional testing, but so far no leaks have been found


-Hardware wallet support
        -Trezor and Ledger continue to function for RVN. Can send and receive
        -Asset support still needs work
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-Plan to remove support for all other brands of hw wallets

-The Electrumx server needs asset index and transaction index
        -server syncing takes about 5 hours with 1 core & 4GB; has 3GB database
        -currently, it cannot see details of transactions before 11-5-2018 when assets went live; will fix this late
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-Currently, there are only 3 Electrumx servers live
        -we need about another week of testing and patching
        -after that, we should request the Foundation to help by hosting two servers

-Current repository locations:
        -the Electrumx serves code is on the Electrum-RVN-SIG repository
        -the electrum client is on the kralverde repo. It will be moved to the SIG repo when it is ready

-The sync'ing mechanism of the electrum client has been dramatically changed
        -originally the client used a file with checkpoints in which there was a checkpoint for every 2016 blocks wi
th the same difficulty on bitcoin
        -each checkpoing contained the hash of the last header in that 2016 block chunk plus the difficulty of that
chunk
        -previously the client retrieved the headers only after the last checkpoint

        -but with Ravencoin Digital Gravity Wave, the difficulty changes with each block
        -so now there is an 80MB file of headers and difficulty for every block
        -now the clients all sync all headers beginning with genesis, requesting a max of 2016 headers at a time fro
m the server
        -the result is a 210.1MB header database stored by the client. It is 15MB size=ion-disk because it is a spar
se file.