Charg Platform V1.1 Architecture / Requirements / Tasks

KISS: **K**EEP **I**T **S**IMPLE, **S**TUPID:

Current assets:

*android app w/ database communication capability and smart contract functions
*iphone app w/ database communication capability and smart contract functions
*node w/ database communication capability and smart contract functions
*credit card and other central functions slated to usurp control of firebase database from apps/nodes (pending)

Milestone General Objective:
Version 1.1 will be 100% commercially viable and secure. A big emphasis on full credit card support. It is an annoying but necessary stepping stone in the evolution of the platform so that we can begin to secure income. It is not the final product. The final product will be FULLY-DECENTRALIZED, while Version 1.1 seeks a shortcut to commercial viability with the long term goal of transitioning to Version 2.0 later on. We also require this version to have Autonomous Open Market Orders implemented (VERY IMPORTANT)

V1.1 Overall Goals (in order of importance):
Easy to Use
Secure, end to end.
Fail-proof
No bugs / errors in user flow
Value linked to coin (via autonomous open market orders)
Impossible to shut down (military grade)
Fully autonomous
Observes "right to be forgotten" laws within a reasonable amount of time (3-4 weeks is fine)
Amenable to transition into fully decentralized (V2.0)

Easy to Use – There is a reason Apple was so successful – the simplest possible route to the user's desired outcome

Secure, end to end – No possibility of things like "man in the middle" attacks across entire platform, end to end.

Fail-proof – bugs are ironed out, assuming no technician will be there to fix things.

Value linked to coin (see autonomous open market orders, diagram, and Dmitry's Tasks) – This instills value in the coin. Every time a credit card is used to purchase time, a buy order is placed on the ForkDelta website (see also Dmitry's remaining tasks for more info)... thus propping up the coin's value *organically*.

Military Grade - Military Grade or approaching Military Grade in time for version 2.0. If all technician work stopped, and the network and/or nodes and/or server and/or platform were being attacked, could the platform survive reliably?

Fully Autonomous – Similar to Military Grade, assume no technician will be there to resolve problems, only node owners and community support.

Team Objectives:

Number one priority is getting 100% commercially ready at this time, and this stipulates that we must have credit card support online.

Autonomous open market orders – This will be critical for providing organic value to the coin over time and with use of the platform. Every time a credit card order is placed to enable the "Chargon" function,", the order is first pushed through the open market, thus propping up the value of the coin organically. If Node Owner opts for CHG, they receive CHG from Dmitry's Server while Dmitry's Server simultaneously places a buy order on the open market. If Node Owner opts for cash, they get cash in the mail monthly while Dmitry's Server simultaneously places a buy order on the open market* (see Dmitry's Tasks for fee schedule).

*The idea here is driving up the price of the coin organically by meeting up with the price of the sell order walls. So the script will need to find out the lowest Sell price of the coin currently in place on Forkdelta, and then place a buy order incrementally lower than this, thus building a "buy wall." See also "autonomous open market orders diagram" (separate document) and Dmitry's Tasks (below) for more info.

Autonomous open market orders for other coins (V1.2) - Just as credit card support can move fiat into Charg Coin's value, so too can the same process be repeated on the open market using any other cryptocurrency or payment method. I think if we support ETH, BTC, LTC, BCH, and then support all competing energy coins as they come online we should be able to maintain network supremacy. For every coin we are able to add that we receive, this coin becomes a new flow of currency (value) into CHG. -- Be thinking about setting up a little exchange since we are pretty much there anyways! The end goal for this item, ultimately, is a multi-wallet that sends bias of currency flow to CHG.

Batch Processing of Autonomous Open Market Orders – open market orders are expensive. They can be easily made less expensive by batch processing multiple charging station actions into one market order (once per day, for example).

Ability to print corresponding QR code on a template so that Station Owners can make parking signs. So that Node Station owner can easily print, two possible solutions: 1) this feature is built into node 2) this feature is linked to by the node, and web host provides template automatically (please find novel, affordable solution that's easy to use).. this must be autonomous for the user experience to be proper!!

Implement user review system, but I am worried about bad actors writing bogus reviews, so we will need to make sure that a user can only leave a review if they can digitally sign the review (pay a fee) and the two parties have done business with one another using the "chargon" function.

Version 1.1 Remaining Tasks:

Oleg S. (Android):
*FORK existing software after polishing to allow for use in fully-decentralized platform later on, then.. *Allow Dmitry's software to usurp control over firebase database changes (allow middle man – Dmitry server – to control firebase entries) – in other words, we have already developed the crude decentralized version of the node, so we need to save this version now and then develop the centralized version
*Add credit card support (coordinate with Dmitry)
*Advertisement to users to become node owners (station owners)
*Fool-proof timeout "chargoff function execution"
*Fix crashing /remember state after crashing
*Error/bug check 1) fast-on protocol 2) slow on (ETH success required) BEFORE and AFTER forking (Before: decentralized changing of database works for 1) and 2) vs. Dmitry's server changing of firebase database also works for 1) and 2))
*Add automatic gas price (using API which I sent you previously) and user ability to manually set gas price
*Node timer and Android timer should synchronize
*Stop button needs to work correctly and reliably, if it doesn't already by now (100% full-proof!)
*Search function sometimes closes instead of searching when I click on "search" - this should be fixed
*Please replace analog clock/timer with digital clock/timer
*Add "review Station" support
*Simplify ease of use of product where possible
*Go over w/ Josef other changes you recommend for App
Requirement: Communication with team when asked, including bi-weekly 1 hour meetings

Oleg F. (Node):
*FORK existing software after polishing to allow for use in fully-decentralized platform later on, then allow Dmitry's software to usurp control over firebase database changes (allow middle man

– Dmitry server) – in other words, we have already developed the crude decentralized version of the node, so we need to save this version now and then develop the centralized version
*add ability for Charg Station owner to delete physical address from map
*Allow node owner to choose between check mailed to them monthly and CHG Coin as payment
*For monthly check mailed to physical address, allow Dmitry Server to control necessary node functions and broadcast required details to Dmitry Server
*Node timer and Android/iOS timer should synchronize
*Continue to Improve user interface – map address should be changeable, ask Josef about map problem when registering
* node should broadcast the following: accepts Charg? Online? Port Type? Connection Type? KW/hr's (if not already defined in database)
*Simplify ease of use of product where possible
*Go over w/ Josef other changes you recommend for Node
*Implement "review driver" option
*Requirement: Communication with team when asked, including bi-weekly 1 hour meetings

Sergii (iOS):
*Complete Previous Milestone ASAP on Guru website
*Replicate Current State of Android functions in order to catch up with Oleg's Android App
*Node timer and Android/iOS timer should synchronize
*Since we are behind, we will build the centralized version first (V1.1), and then the decentralized version (V2.0)

1) FULLY FUNCTIONAL ERC-20 wallet functions including "chargon" "chargoff" etc. etc., in other words all applicable functions found in https://etherscan.io/address/0xc4a86561cb0b7ea1214904f26e6d50fd357c7986#readContract

2) App is PUBLISHED in apple store and fully accessible to the public

3) Add credit card and apple pay API functionality per Dmitry's specifications in order to accomplish 2)

4) Attend all team meetings, help other team members when asked to do so

5) Remove all bugs from app

6) Begin ensuring fluid user experience with no breaks in flow.

Ongoing tasks: See Oleg F., Dmitry, and particularly Oleg S. tasks to define ongoing tasks (catching up)

Dmitry (Credit Card Server):

Required Functions:

1) convert credit card purchase $ (placed via apps + this server) to time, then convert time to CHG, using Oleg Node's advertised rate at a given station + a given app user's indicated amount of time to resolve correct solution

2) send converted (from 1) CHG to appropriate node owner to begin transaction

3) each time a credit card purchase of time is made, there needs to be a corresponding "good til cancelled" buy order of the equivalent amount of CHG purchased on forkdelta website:

https://forkdelta.github.io/#!/trade/CHG-ETH

with the following parameters: 91% of CHG bought by credit card purchased on the open market, 9% of purchase remaining dormant (this being our fee profit)

4) server needs to check node balances, and make sure node has 500 CHG as balance before it can have permission to be listed on the firebase database

5) at present, nodes and apps have direct control over database. This is a good model for version 2.0 in the FUTURE, so you will need to correspond with team to fork all platform components in order to A) complete platform V1.0 (centralized) B) plan for future of fully-decentralized model

6) knowing (5), you need to coordinate with rest of team to complete platform V1.0 and usurp control which apps/node presently have over database such that centralized server is only way to update database entries, instead of database entries being freely controllable by everyone.

7) Next version of Oleg node will have the option to choose between receipt of payment in USD$(fiat) via monthly check (minus 9% fee) or receive payment in CHG for no fee. This decision obviously affects (3): if node owner chooses monthly check, then no (3). if node owner chooses to receive payment as CHG, then yes (3)

Open communication with rest of team when required

CTO position with expectation of leading team to completion of platform

ongoing: complete platform V1.1

ongoing: aid design of platform V1.1 to be up-gradable to V2.0: fully decentralized, fully autonomous (sans centralized credit card processing)

Ongoing: "military grade" "fully autonomous" "decentralized" "true trustless"

Fully secure

Requirement: Communication with team when asked, including bi-weekly 1 hour meetings

Ongoing (future) goals (V2.0)
Quantum resistant
Secure off-grid transactions possible
Fully trustless: probably borrowing more than one blockchain's mainnet!
FULLY Military Grade
Fully Decentralized
Stand-alone (We create our own Mainnet)
Environmentally friendly
Anonymous?
Utilizes Quantum and AI to meet or improve these goals? Quantum Encoding/decoding for authentic off-grid transactions?
Difficult to accrue an uneven distribution of wealth?
Tax/fee system for the above?
Add multi-language and multi-currency support