

## BlockchainHub - Feature #18

### GamerPool (working title)

23.10.2016 01:35 - didi

<b>Status:</b> New	<b>Due date:</b>
<b>Priority:</b> Normal	
<b>Assignee:</b>	
<b>Target version:</b>	

**Description**  
**Abstract**

Gamers usually hardware well suited for *mining* (tooltip which explains what that is, may provide link to external detailed explanation).  
There's currently an opportunity to profitably mine with stock hardware, even where electricity prices aren't lowest. The information about this opportunity seems not yet to be widely known in the gamers community (according to a search for "mining" and "ethereum" on <http://steamcommunity.com/discussions/>).  
Hypothesis: Most gamers don't yet know. The entry barrier isn't yet low enough for the information to spread.  
This is a proposal for what needs to be provided in order to become attractive for a larger audience.

**User journey**

The gamer and potential miner is linked to a website, say gamerspool.com

**Teaser**

Do you have a powerful gaming PC?  
Did you know that it could literally produce money while not in use and help decentralising power in the process?

*Call to Action:* Find out if your hardware is suited

(Clicking this loads the *Tester*)

**Tester**

Loads an application which determines the capabilities of the GPU (may use WebGL)  
Find out: can this determine the GPU model and memory size?  
If not, one of those approaches may work:

- Run a benchmark. It may be possible to implement the PoW algorithm or a similar enough one such that the possible hashrate can be guessed
- Find the memory limit: allocate memory until it fails. Not sure if that works (the OS may transparently fall back to main memory)
- Tell the user to go to `chrome://gpu/` (needs Chrome browser) and paste specific information from there (e.g. the field `GPU0`)
- Let the user select from a list of GPUs in a user friendly way (e.g. autocomplete search box)

If the results are satisfying: Your Hardware seems to be suited for mining!  
Otherwise: Unfortunately your Hardware isn't suited (may also offer more details).

*Call to Action:* What's the deal?

**Deal**

With your hardware, you can create approximately x Ether per month (assuming it's running all the time). That corresponds to y USD at the current exchange rate. You can anytime convert Ether to USD (or any other currency of your choice). You can also keep the money in Ether, considering that there's a good chance for it to rise in value (link to historical chart).

Please consider that running your PC consumes electrical power. Depending on the price of electricity at your location, that may make mining unprofitable for you. You can use this calculator in order to find out if that is the case:

Calculator here (see <http://ethereum-mining-calculator.com/>, but simplified version).

Note that this calculation is a snapshot of the status quo. There's no guarantee that the profit rate remains as it is. It may get higher or lower in future. If you determine that it's nomore profitable for you, you can just stop mining. You will **not** lose the money

mined/earned until then.

*Optional:* You can also configure the software to automatically do that conversion for you and get directly paid out in a currency of your choice. In this case however there's a fee of 10% to be paid and payouts require a minimum amount of 10 USD (or corresponding) to take place.  
(Not sure if we really want to / can offer that)

*Call to Action:* Get started!

## Installer

This installer contains all necessary software. Just install and run it while connected to the Internet. It will then connect to a gamerspool server from which it gets *work packages*, calculate them and send them back to the server. This process continues as long as the application is running. For every processed work package a bit of crypto money is added to your account, which will be shown in realtime in the user interface.  
That's it!

*Call to Action:* Download installer

Link to FAQ

## FAQ

- What does the software do? What is this *mining*?  
The computational power of your Hardware is used to secure Blockchains underlying Crypto-Currencies. This is done by solving cryptographic challenges, a process named "Proof of Work".  
More explanation, [Link to more resources](#).
- Why do you help me make money?  
We promote Blockchain and Cryptocurrency technology, because we believe in decentralisation.  
Also, 10% of your mining revenue will go to the pool. This covers development and maintenance cost and maybe can also generate enough revenue for funding other projects related to decentralisation.
- Is there any risks involved?  
If your Hardware is working properly under high load, there should be no risk (no more than playing a game).  
The mining process will use the full computing power, mainly of your GPU. Thus make sure it can not overheat!  
You should also be aware that your Hardware consumes electricity. If you don't pay for it yourself or if you are in an environment where electricity is shared, make sure you don't break any rules by using your Computer for mining. You may consider just using part of the mined money to pay for it.
- Why doesn't everybody do this if it's so easy?  
Because it's so new. Mining started with Bitcoin around 2009. However, Bitcoin uses a different *Proof of Work* algorithm which soon made it unprofitable to mine with stock Hardware, because the algorithm allowed it to build specialized Hardware (*ASIC* miners) which could solve the cryptographic challenges much faster. The Ethereum PoW is designed to make it impossible to build specialized Hardware for it.

## Payment

The user should not have to deal with account creation or the like in order to get started with mining.  
Since an address (private/public key pair) is needed in order to get funds, the client software should create it automatically after start.

Security and information may be increased depending on the funds. E.g. once the value of the account reaches - say 5 USD - the user should be actively informed that the money would be lost if e.g. the harddrive failed and instructed how to convert it to a fiat currency or backup it (encrypted).

This would also be a good moment to offer password protection to the account.

We may also offer keeping the money in a pool account until retrieval, could be implemented via smart contract.  
This would eliminate the risk of losing it e.g. in a harddrive failure. But it would still be possible to get stolen, e.g. if the Computer is compromised (physically or virtually). The main challenge would probably be explaining it to the user (but that's a challenge either way).

Edit: even in this case a harddrive failure would lose the money, because there's no more means to identify the user for retrieving from the pool. Unless - the client can generate a unique id based on the installed hardware - which generates new corner cases e.g. in case of Hardware upgrades. Probably doable, but not trivial.

## Pool

For the pool, it should be possible to use readily available open source code, e.g. <https://github.com/ming08108/EtherPool>

## Meta

It is important to have the whole user facing stuff multilingual if we truly want to get it distributed.

To be determined: channels for seeding the information.

With fee sharing it would probably be possible to get blogs, magazines etc. on board.

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## History

#1 - 08.11.2016 02:31 - didi

- Description updated