

[ Pitch Deck ]

# Outsourcing hardware actuation through software actuation

or  
'how bots like to keep cleanliness!'  
(using human turks to match patterns for them)

(skang)

# Motivation

Grid computing as a technology, when combined with bitcoin:

...it can help **reduce the cost of centralization** on the society,  
as explained in satoshi's paper .

[What are the govt services, that involve such machines which are ready to accept bitcoin today?]

*...self-driving cars aren't ready yet so something not so heavy on mobility maybe?*

...& the computation **nodes can now sense and act**,  
as incentive model for a network that provides some service,  
for a payment made to the nodes .

[What are the incentive models that are possible in a grid?]

*...maybe the nodes pay & world earns from the network? ...maybe it's zero-sum within the network?*

# Concept

A garbage-box with a

- digital lock &
- a camera wired to
- the 21 computer board

buys waste plastic bottles

- from pedestrians

by outsourcing this pattern-recognition work

- as a captcha service, on 21 mkt
- to humans who earn satoshis

and uses this profit to

- pay for its running costs or
- dividends to its investors or
- invest in new installations of machines like itself.

# Details

...If the garbage that the machine accepts is **recyclable/reusable/biodegradable**,

the dustbin sells the waste and earns money,

with which it funds its running-cost, & if surplus,

funds new installation & pays back the investors .

[Investors of first such machine are effectively in a *distributed autonomous organization*]

*...so does this mean each garbage type is a new DAO?*

...Or if it is **toxic & undesirable**,

the dustbin loses money but investors keep funding it, to keep the place clean

& in lieu, boycott paying some tax .

[Investors of such can ask for rebate from the government. Cleanliness subsidy.]

*...to increase cleanliness just increase the reward by funding your neighbourhood machine!*

# Stakeholders

## . Community

Earns money or **reduces taxes** on themselves!

*...while keeping the neighborhood clean!*

## . Developers

Gets a **foolproof captcha service**

*...real-world randomness!*

## . Users

**Happy to get bitcoins** for solving captchas

*...“If the machines will do everything what will humans do?” “Recognize patterns.”*

## . Real-life Users

Their act of **nobility is rewarded**

*...and they get a cleaner world!*

## . Government

**Reduced responsibilities**

*...they can tax the DAO.*

# Implementation

- . Community crowdfunds machine.

*<schnorr signatures transaction>*

*...currently crowdfunding is limited to a certain number of signatures*

- . Sweeper holds garbage in front of camera, machine populates captcha API.

*<camera API, 21 mkt API>*

*...machine displays camera picture if valid otherwise sends normal captcha*

- . The internet solves the captcha & bin opens.

*<21 mkt API, bin API>*

*...developers can use this listing on 21 mkt to integrate captcha on their site*

- . Machine pays the sweeper.

*<camera scanner API, smart contracts>*

*...maybe the machine can do other complex contracts*

- . Machine sells the garbage to recycling plant.

*<21 mkt API>*

*...or can issue a reward on the marketplace if the garbage is toxic*

# Musings

- . The machine can **self boot**, mine a few satoshis, pay it to captcha solvers, to collect garbage, sell the garbage off to pay for electricity & so on...  
...the real power of 21 computer, answer to 'why buy 21 comp instead of btc?'
- . This means the DAO can also be bootstrapped with a small investment equivalent to the hardware deployed.
- . If there are multiple DAOs competing then the probability of success depends on Which group chose the optimal location for new installations.
- . Needless to mention, if there is too much relative supply of such machines, they wont earn enough to pay for their running cost and go dormant. Need small impulse to wake up.
- . It is an exercise in AI to determine whether the surplus money should go towards ordering new installations or dividends or emergency funds.
- . One can foresee that maybe our scheme won't be able determine true value for a piece of garbage & hence ultimately would need a separate blockchain for each DAO.