BitCoin of Things (BoT)
Theory and practice Workshop.
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This is a Workshop addressed to those who have concerns with Media Art, Digital culture, Critical Economy, Electronics and Internet of Things (IoT). Theoretically, it introduces concepts, examples, art-works and books in order to understand Bitcoin and Blockchain world. Practically proposes to work with a basic electronic circuit, welding and microcontrollers building a playful bitcoin miner. The objective is to transform daily life objects (E.g. Maracas, hammers or salt shakers) into Bitcoin miners able to connect to the blockchain, calculating a hash to trying to get a reward of 12.5 Bitcoins.
Keywords: Device Art, Critical Engineering, speculative design, Wireless interface.

Conceptual part

The Bitcoin was conceived as an electronic decentralised system for capital transactions. Each node (user) had the same opportunities to get a reward when validating a transaction. In the last years, this system has triggered in a competitive struggle in which computing power is the most important variable for earning Bitcoins. This involves the use of large equipment, computers farms spending physical and environmental resources. A dispute that benefits only the owner of the most powerful and efficient technology. Causing A BIG WASTE OF ENERGY!!!! *Bitcoins of Things (BoT)* transforms this "Crazy" way of producing Bitcoins into a playful Lottery.

HOW!!!!??

The Bitcoin mining process consists of finding a random number called "Nonce", which added to the Headerblock and through a Hash function returns a number (hash value) that if starts with a sufficient number of zeros (difficulty) can be validated by the Blockchain network. When this number is found a reward of 12.5 Bitcoins (approx 9000€) is earned by the miner.

Working proposal:

Participants will build a *BitCoin of Things (BoT) miner* combining a Wi-Fi microcontroller and different sensors such as an accelerometer, microphones or buttons, generating a "Nonce" from its reads try to validate all the Blockchain pending transactions. The possibilities are lower, but it decreases the use of energy of the calculation processes making it more sustainable. Finally, the microcontroller is attached to daily life objects, like keyboards, computer mice or salt-shakers, by using them the object can potentially generate big number of Bitcoins, playing with the idea of finding the philosopher's stone. See BITTERCOIN:
https://escuderoandaluz.com/2016/03/03/bittercoin/
http://spectrum.muimota.net/bittercoin.html

schedule 3 hours Workshop.

- ***30 mins. Introduction***
- ***2 hours. Electronic development interaction.***
- ***30 mins. Physical to Internet objects connection.***

Materials.

- ***NodeMCU/ES8266* microcontroller for IoT**
- ***Sensors and actuators like buttons, accelerometers, switches, photo-resistances, etc.***
- ***Screen LCD Oled.***
- ***5v Battery.***

Tools

- ***Internet connection.***
- ***Soldering Iron.***
- ***Glue gun.***

Selected Workshops

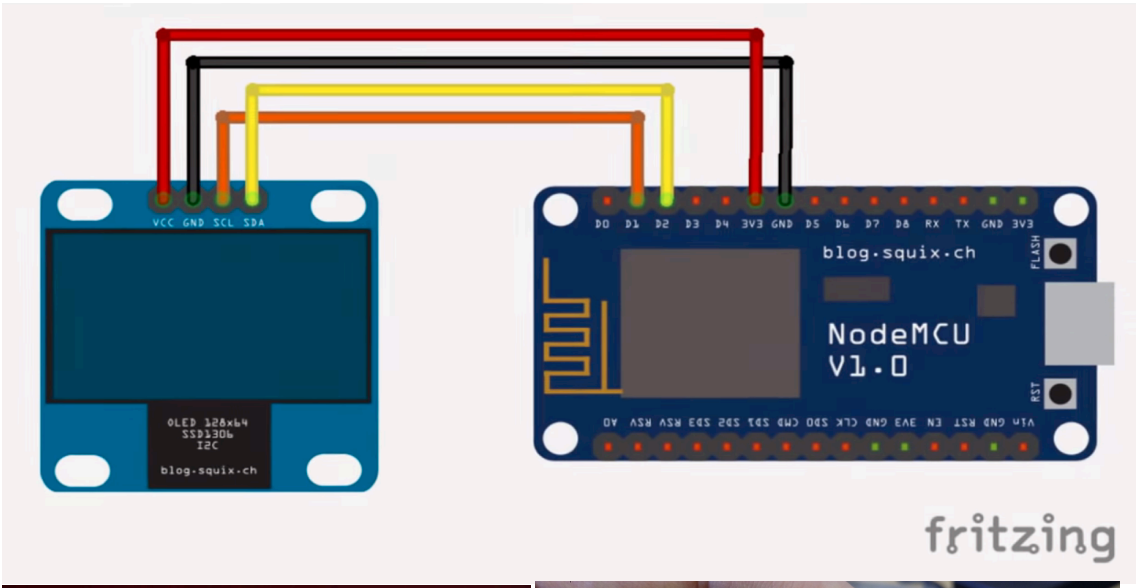
-2016 ART MEETS RADICAL OPENNESS. *Physical NET-bots,+ Death of Things* Linz, (Austria).

-2016 ARS ELECTRONICA FESTIVAL. Radical Atoms, Mini-maker Faire, *Physical NET-bots,* Linz, (Austria).

-2016 ETOPIA, Center of Art & Technology, Zaragoza (Spain)

-2016 YIMA, *IoT, blockchain advisor* Sarajevo (Bosnia Herzegovina)

-2016 MEDIALAB PRADO *Death of Things* (DoT) (Spain)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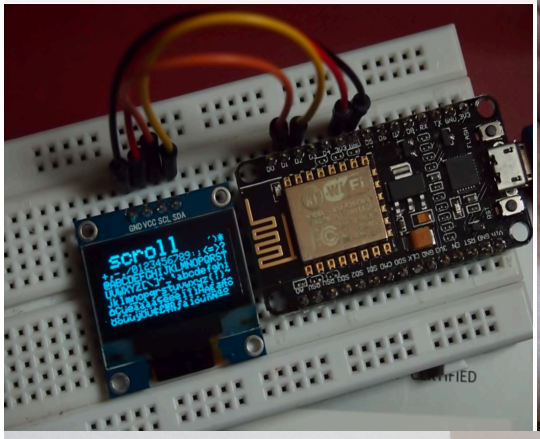
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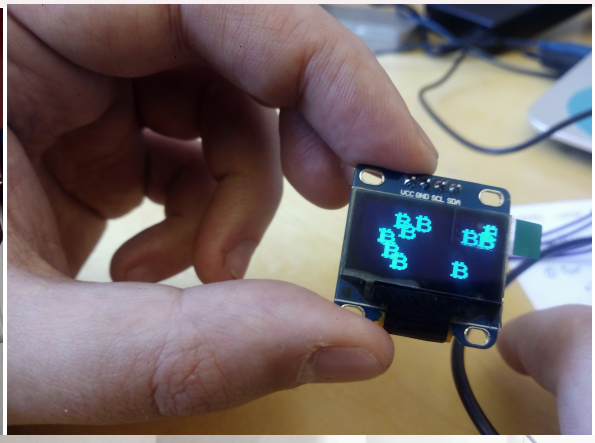

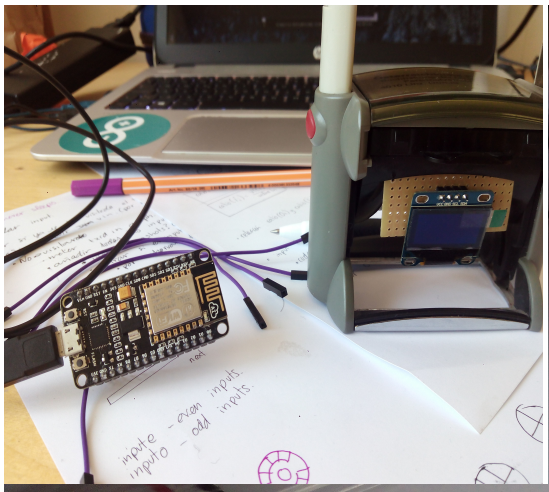
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