

***Séminaire Capitalisme Cognitif - vendredi 26 Sep. 2014
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Bitcoin for the Common

Good: Bridging Operaism and Banking Engineering

On the one hand, the notion of a Bitcoin for the common good is derived from philosophy of economics (Sini, 2001) and new technological developments opening up possibilities of the institutionalization of a transparent and open P2P G/Local multi-currency system that has its theoretical roots in the literature on the *Common* (Negri and Hardt, 2009), the *Commons* (Ostrom, 1990) and the Italian *Operaism* (Lotringer and Marazzi (eds.), 2007) for

the re-appropriation by the Multitude of the power of currency creation.



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On the other hand, alongside the literature on Crypto-Currencies (Nakamoto, 2009; ECB, 2012; Freidenbach and Timon 2013 DF; Sachy, 2013 DF), the study of the theoretical framework and best practices in the field of Complementary Currencies (such as Lieater and Kennedy, 2012; Douthwaite, 1999; Lieater, 2001; Lietaer, Arnsperger, *et. al.* 2012; Lietaer, Ulanowicz *et al.*, 2009 and 2010; North, 2007 and 2010; Greco, 2009) has been the main focus for payment system's engineering inspiration for

a **decentralized, distributed and structurally resilient** payment system co-designed with - and **self-managed by - users.**



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The implementation of the Bitcoin protocol over the past five years opens up a whole new field of possibilities of currency design for the common good:

We intend to keep both **Circulation** and **Authentication** procedures from the Bitcoin Protocol.

However, we are going to radically experiment on the notion of **Social Proof-of-Work**, i.e. the extent to which it is possible to **directly inform the algorithm generating the money supply by the users of the system** neutralizing as possible the **hierarchical, vertical** and **centralized** decision-making constraints of the conventional money system.



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Assumption:

Users should be allowed to self-manage the system's money supply to the extent to which the latter affects users possibilities of economic engagement in the productive (not speculative) economy.

Research Question:

The problem to solve is to check whether it is possible to design decentralized currency systems wherein the quantity of money in circulation is always optimal (sufficiency of the means of exchange) and adjusted in real-time.



Methodology: Lean Development

#1 Interviews, user groups and personas

From January to March 2014 three **lean inception workshops** took place in the three pilot countries consisting of user interviews, persona development and hypothesis testing.

Rather than focusing on features, the aim of the initial workshops was to find the main problems that users were encountering and then to draft a series of **hypothesis statements based on the interviews as a method to identify underlying assumptions about users' needs and solutions to be verified.**

Empathic Design

Methodology: Lean Development

#1 Interviews, user groups and personas

#2 Hypotheses statements

They serve the purpose of **turning the interviews with users into potential solutions and features**, and should therefore be easily discarded if the assumptions are not verified when tested in the field.

*Bridging Qualitative Social Research & guidelines of
Protocol Design for Transfer of Value*

Methodology: Lean Development

#1 Interviews, user groups and personas

#2 Hypotheses statements

#3 Lean Canvases:

When a hypothesis has been selected for further development, a **Minimal Viable Product** is brainstormed and a set of features are noted down that are assumed to address the users' stated needs. A lean canvas is then drafted for the "product" in order to tease out further assumptions underpinning the "product" and any potential feature related to its viability in the field as well as key metrics to measure its success.

*Three Lean Canvases have been developed
for the Digital Social Currency pilots*



Methodology: Lean Development

#1 Interviews, user groups and personas

#2 Hypotheses statements

#3 Lean canvases

#4 Experiments

For each “product”, a series of MVPs will be developed and tested. An MVP can be any type of experiment that will feed back information needed in order to validate a hypothesis and refine the product.

Tests and experiments with lead-users and communities will take place on an on-going basis and be shared and monitored by the D-CENT consortium.



D-CENT Currency Pilots

Who are the stakeholders / Pilot Communities?

EU citizens, SMEs and municipalities in Iceland, Finland and Spain.

What they have in common:

to foster the Anthro-Genetic Model of Human Development (Marazzi): productive economy, health, education / research, culture.

D-CENT Currency Pilots

Iceland: Hypothesis on Reward System for Political Participation

We believe that by	creating a reward system for measuring user engagement expressed in social credits, spendable in the Icelandic socio-economy (public/private - facilities/utilities and businesses)
For	Users of the Your Priorities platforms
We will achieve	an increase in the quality of users engagement while expanding users base.
We will know this is true when we see	An increase in the number of contributions and return users. An increase in the depth and quality of research behind the contributions.



Through a collectively agreed-upon reward mechanism in the form of an *audit function*, Your Priority users can interface with the Freecoin Social Blockchain, wherein social credits will flow in the geo-localized market place. For example, rewards can be assigned proportionally in relation to best ideas that have been selected, rewarding contributions to the collective good within the City of Reykjavik.



D-CENT Currency Pilots

Finland: Hypothesis on Tool for TimeBanking transactions

We believe that by

creating a tool/UI for allowing users to make time-banking transactions in Tovi more efficiently in a payment system and digital market place that allow for a better automatized operations

For

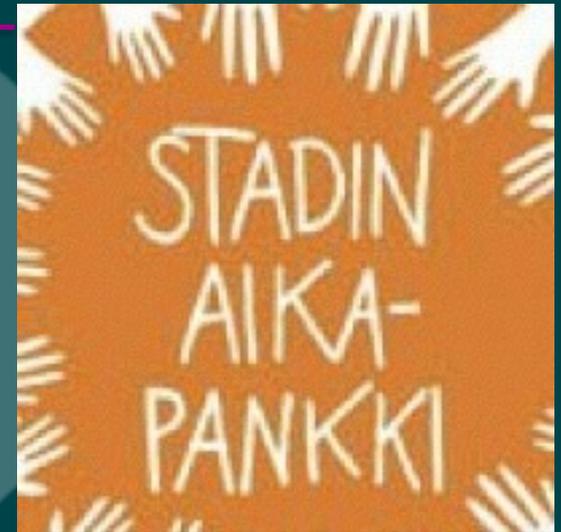
members of Helsinki Timebank, and potentially the whole Finnish time banking network

We will achieve

A more efficient exchange dynamic among members and the system as a whole

We will know this is true when we see

Nationwide increase in the quality of total systemic accountancy for Finnish time-banks in general, i.e. maximization of internal levy conditioning and better error correction monitoring measurable as a change in behaviour of more engaged members, who are now less constrained by payment procedures in that they enjoy higher quality software



Conditioning the behaviour of the internal Tovi levy in the broader landscape of automated error-correction procedures; maintenance time drains too much attention from necessary activities (such as campaigning against the taxation of services transacted in Tovi).



D-CENT Currency Pilots

Spain (Catalunya): Hypothesis on a Clearing system for Social Control of Credit

We believe that by	developing a technical architecture with a socially performing blockchain
For	the Eurocat regional currency
We will achieve	community control over credit
We will know this is true when we see	widespread adoption of the architecture and SMEs gaining credit who were prevented from it previously

As a newly established Regional Complementary Currency Network, EuroCat needs a user-friendly and viable technical infrastructure on which to build the network while expanding financial literacy.

After the qualitative social research, Eurocat is the best social laboratory for experimenting with Freecoin / Social Blockchain: D-CENT will be presented within October 2014 at the *Parlament de Catalunya*.



D-CENT Currency Pilots

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What would happen if users hit by austerity measures could express their needs in monetary terms on a platform that would then translate such money needs into instructions for the algorithmic creation of the money necessary for users to conduct a decent life in the real economy?

This is the inquiry that will shape the Micro-Endorsement System designed by EuroCat Managers in concert with Users.



Lean Canvas EuroCat: Socially Controlled C3

6.5.2 Lean Canvas 2: Socially Controlled Commercial Credit Circuits

<p>Problem</p> <p>SMEs and independent producers have limited access to affordable and viable lines of credit streams – a tendency that has been exacerbated since the financial crisis.</p> <p>Existing alternatives</p> <p>WIR</p> <p>Sardex</p> <p>SoNantes</p>	<p>Solution</p> <p>A Digital Social Currency architecture that allows for social control and management of credit</p> <p>Key Metrics</p> <p>Increase Local Multiplier Effect in pilot areas also measured in time-credits</p> <p>Increase Velocity of Circulation of Currency</p> <p>$(Vt = \{nT\} / \{M\})$</p> <p>Decline in the unemployment rate</p>	<p>Unique Value Proposition</p> <p>A scalable system for access to credit for those who need it the most, determined by the communities themselves</p> <p>High-level concept</p> <p><i>“Mining” for the social good</i></p>	<p>Unfair Advantage</p> <p>D-CENT is free to use</p> <p>Close collaboration with founders of EuroCat, Intercanvis and Helsinki Timebank</p> <p>Channels</p> <p>Eurocat</p> <p>Intercanvis</p> <p>Helsinki Timebank</p> <p>CES systems</p> <p>Digital wallets</p>	<p>User Segment</p> <p>EuroCat</p> <p>Intercanvis</p> <p>Helsinki Timebank</p> <p>Icelandic SMEs and freelancers</p> <p>Early adopters</p> <p>Eurocat</p> <p>Intercanvis</p> <p>Helsinki Timebank</p>
<p>Cost structure</p> <p>Free to use, open source</p>		<p>Revenue stream</p> <p>Self-sustainable</p>		



Summary:

- 1_ Municipal Currencies
 - 2_ Reward Systems
 - 3_ Social Control of Credit
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Main three common themes that resolve classes of problems emerged after cross-pilots and cross-use-cases fieldwork analysis in Part 1 and Part 2 of deliverable 3.4, respectively.

The **Freecoin Suite** aims at giving a codebase to pilot communities that allows to run the above types of currency systems on the FLOSS Social Blockchain Technology:

A Monetary Rhizome



References:

Douthwaite, Richard, *The Ecology of Money*, Schumacher Briefings (No 4).1999.

Freidenbach, Mark and Jorge Timon, 'Freimarkets: extending bitcoin protocol with user-specified bearer instruments, peer-to-peer exchange, off-chain accounting, auctions, derivatives and transitive transactions', Draft, August 2013. Available at <http://freico.in/docs/freimarkets-v0.0.1.pdf>.

European Central Bank, 'Virtual Currency Schemes', Report Oct. 2012 - <http://bit.ly/RBbPVM>.

Greco, Thomas H., *The End of Money and the Future of Civilization*, Chelsea Green Publishing, 2009.

Kennedy, Margrit and Bernard Lietaer, *People's Money - the promise of regional currencies*, Triarchy Press, 2012.

Lietaer, Bernard, Christian Arnspenger, Sally Groener and Stefan Brunnhuber, *Money and Sustainability - the missing link*, Triarchy Press, 2012.

Lietaer, Bernard, Robert E. Ulanowicz, Sally J. Goerner and Nadia McLaren. "Is Our Monetary Structure a Systemic Cause for Financial Instability? Evidence and Remedies from Nature", in *Journal of Future Studies*, Special Issue on the Financial Crisis (April 2010).

Lotringer, Sylvere and Christian Marazzi (eds.), *Autonomia: Post-Political Politics Semiotext(e) Journal*. 2007

Nakamoto, Satoshi, *Bitcoin: A Peer-to-Peer Electronic Cash System* (retrieved at <http://goo.gl/RdYQO> on 23 May, 2012), 2009.

Negri, Antonio and Michael Hardt, *Commonwealth*. Harvard University Press. 2009.

North, Peter, *Local Money - How to Make It Happen in Your Community*, Transition Books, an imprint of Green Books. 2010.

North, Peter, *Money and Liberation - the Micropolitics of Alternative Currency Movements*, Minneapolis: University of Minnesota Press, 2007.

Ostrom, E., *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press. 1990.

Sachy, Marco, 'The New Frontier in Payment Systems: Virtual Currency Schemes, the C3 Uruguay case and the Potential Impact on SSE' (Draft),

United Nations Institute for Social Development, May 2013. Available at <http://bit.ly/1sV2meR>.

Sini, Carlo, *Filosofia e Economia - O del viver bene* (approximative English translation: Philosophy and Economics - On the Good Living), Milan: CUEM. 2001.



Thank you for your time

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