WITCOIN
move the knowledge

WHITEPAPER

Witcoin – Part I: The Concept

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(Part II contains the technical description of the full platform,
the token approach, the service and format design, and more)

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Draft ver. 0.10; August 22, 2017

Abstract . —— Witcoin is a currency backed by knowledge. Alternately, knowledge is the currency that enables participation in the new global economy, the knowledge economy: this enables anyone and everyone to participate or contribute if they possess the requisite knowledge. A new overlaid decentralized platform of several actors that consult with each other across corporations and organizations is conceived for connecting and developing individuals, their ideas, and their projects so that the individuals collaborate with each other, getting and providing the best of their digital selves: their knowledge. The more knowledge that is put into action, the more wealth and the more witcoins represent and share this benefit among the actors. Some of them will do it professionally for themselves or on behalf of a company, others as a safe complement of their experience.

We all need this knowledge anytime: individuals, as peer consumers, might get knowledge online that helps them connect to the proper resources, experts, and partners to address the needs of their projects. Doing so, individuals will perceive that they can conduct business in novel ways and become peer producers such that they might consult with anyone else and get (extra) income with their high-added-value knowledge services. As new liquidity soars, there will be no good project left behind, and the economy will thrive.

Just as e-mail enabled bilateral messaging and bitcoin enabled bilateral financial transactions, witcoin enables multilateral knowledge empowerment, i.e., knowledge into action, of the highest added value.

Witcoin is then the currency that will best match the needs of the knowledge economy, the next global industry in the revolution we are living, so that the money supply is linked to the added value of connected knowledge for our society, our needs, and our resources. Witcoin will enable a new business of unprecedented impact and value, as the new virtual currency will be available to fund (new) business in unprecedented ways.

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¹ This whitepaper is composed of two parts: the first is for witcoins and the roadmap, and the second one presents a detailed platform description.

I. INTRODUCTION (THE VISION)

WITCOIN IS A PARADIGMATIC change of the economy powered by knowledge that has become an object of disruptive improvement with the advent of the Internet, crowdsourcing, virtual currencies, blockchain, smart contracts, and artificial intelligence in the century of online platforms, the shareconomy, and the knowledge economy.

We think of knowledge as the currency that enables participation in the new global economy, the knowledge economy [1]. This enables anyone and everyone to participate or contribute if they possess the requisite knowledge. The growing awareness that Knowledge-Based Capital (KBC) is driving economic growth is prevalent in today's global marketplace. KBC includes a broad range of intangible assets, such as research, data, software, and design skills, which capture or express human ingenuity. The creation and application of knowledge is especially critical to the ability of firms and organizations to develop in a competitive global economy and to create high-wage employment [2]. Aging populations and dwindling natural resources mean that growth in advanced economies will increasingly depend on knowledge-based increases in productivity. Unlike labor, natural resources, and physical capital, KBC is the only factor of production that will not suffer from scarcity. The message remains clear: to promote long-term growth and the jobs of tomorrow, public and private bodies, or self-organizing communities, must ensure a policy framework that helps businesses invest in KBC, companies adopt KBC-friendly policies, and individuals become accustomed to making a living with their knowledge.

However, KBC requires multiparty collaboration to yield fruits, as involving other parties when developing new products, services, and technologies is of large added value. Think for instance about cooperation with other firms in your sector, suppliers, universities, and of course end-users to back your new projects. They are **peer** producers. **Peers** are knowledge providers and consumers, with useful knowledge apart from being paid for their services; additionally, they might today be acknowledged and rewarded. This double incentive of work, time, and knowledge will boost collaboration and the proper knowledge exchanges at the widest and pervasive scale of the highest intensity for boosting growing flows of successful projects of unprecedented added value.

Our proposal is to acknowledge and reward peers with **witcoins**, a virtual currency backed by knowledge. It was originally conceived from the concept of 'wits' (Carrillo, de la Rosa, et al., 2006) and (Carrillo, de la Rosa, and Canals, 2007) as the currency that was supplied for granting knowledge that was useful for peers. Several of their implementations had strong influence of the prevailing scientific publication and citation system, which served well as the inspirational paradigm for the PageRank algorithm.

The currency was mentioned again by (de la Rosa et al., 2016) advocating for its adoption in Open Innovation (OI), and a first of its formulations was developed to help innovators and innovation consultants fund and develop innovation projects (de la Rosa et al., 2017).

Wits are "stuff that makes sense (to someone else)." Knowledge is considered to make sense when it seems to be useful when cited or referred by the peer community. The citations are made by the peer community, the acknowledgement is calculated and transferred by an expanded community, and therefore all these community tasks are rewarded in virtual currency: witcoins.
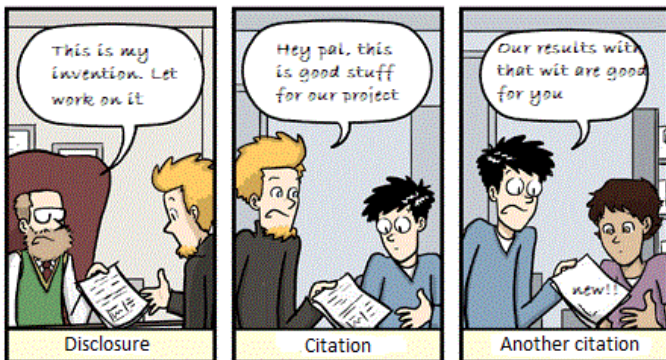

Fig. 1. The old guy on the left receives more acknowledgement, citations, and witcoins the more his disclosed wit is reused by people who make sense out of it (original pictures of Jorge Cham @2014 with new text)

Witcoin is conceived by taking into account the background we are entering into, the era of platforms with strong digitization of the knowledge economy, with sustainable growth thanks to the fact that knowledge is being created and put into practice faster and faster, where proper fuel, so it can be a currency, is needed. In the future that is becoming real so quickly, more and more people act as knowledge providers, not only consultants or advisors, and more people in companies or for particular purposes consume their knowledge to combine with theirs and create great new products, services, and knowledge. Thus, the productive economy is progressively more dependent on the knowledge economy, where new digital platforms, such as those of OI, help users Connect and Develop ideas, projects, and enterprises (C+D). We advocate that there is a need for novel platforms that support open, frank knowledge exchanges at the largest scale to set up the foundations of a knowledge-based economy (witseconomy) and its proper currency.

In the witseconomy, there is a need for proper virtual currencies to grow according to the continuous expansion of intellectual/knowledge activity with impact on all of society, which is speeding up. Witcoin is the first of the likely series of knowledge-backed currencies that will be designed to match and fuel the accelerated growth of society thanks to how it enables knowledge.

Witcoin takes this focus beyond firms to individuals, professionals, and peers, similar to how LinkedIn focuses on professionals rather than firms with great adoption success. It fits nicely in the promise of OI, which extends towards a distributed innovation process based on purposively managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization's business model (Chesbrough and Bogers, 2014). This definition highlights the communicative and connection process across organizational boundaries, being distributed and biz-oriented, as witcoin is conceived.

Witcoin is structured around any application (any Dapp aimed at solving real-world problems) *dealing with registered communication of knowledge among peers* and its posterior acknowledgement, in terms of IP, ideas, collaboration and proposals, where they are discussed, challenged, and agreed upon, with the result of collaboration agreements, contracts, and publications among several other future outputs and their

disclosures. Peers will share their knowledge digitally in an online environment, where they will plug their personal Wits Vault (WV) to register, collect and reuse all their wits for future disclosures. The WV will be an external service interacting with any type of application (email, social network, or digital consultancy). Whenever a user cites someone else's wits, the wit owners will be rewarded as a means to acknowledge their contribution and the usefulness of their wits.

Witcoin is the currency that fuels the witcoin platform, which goes across platforms to fulfill the vision that everybody can consult from and to each other, so that they are rewarded or acknowledged accordingly with virtual currency that is backed by knowledge. Companies and organizations will be enabled to issue their own witcoins to reflect their internal knowledge creation and valorization, such that individuals will collect several types of witcoins of different value that will add value from many sources.

Note that, in today's networked age, competition is increasingly over platforms, and witcoin is the platform for the witseconomy, pervasive for answering or referring whatever open questions peers have: a new way of doing business with knowledge, accessible for all, and ready for the adoption of crowdsourcing, blockchains, and AI. Platforms also rely on the power of network effects; as they attract more peers, they become more valuable to those peers, the witcoiners.

II. ROLE DEFINITION

Let us define the roles of participation in the witcoin ecosystem and how they are expected to interact to make it reliable and trustable. We envisage the existence of the following roles:

Peer. A peer is any person or institution that wishes to disclose wits or needs them to build up his or her own projects, solutions, or services. Disclosure consists of communicating, registering, storing or sharing wits through the witcoin platform as valuable intellectual property. A wit is of any form of knowledge (idea, invention, process, text, message exchange, design, media, material, etc.) that might be of value for another peer. The objectives of the peers can be manifold: from acquiring a proof-of-existence (PoE) of some piece of knowledge at a given time, to being backed with a trusted system to safely share undisclosed information with third parties, to proof-of-genuineness (PoG) so that the peer claims rights on this wit that will be redeemable when it will prove to make sense to someone else.

Registrar. Registrar is the role of nodes in the platform that any person or institution can acquire by giving a registry service in the witcoin ecosystem to any peer. The registration of a wit is done by calculating the hash (or cryptographic digest) of a wit in the form of a media file. The wit hash is inserted in the blockchain, thus ensuring a PoE of the wit and PoG of the wit regarding the peer. Registrars offer this service in exchange for a registration fee paid in witcoins (₩) or through any other type of agreement among the user and the registrar (e.g., subscription service) to be paid in any currency converted into witcoins. The registrar makes it simple for users within a domain to get enrolled on the witcoin platform without needing to consider the creation of wallets, acquisition of witcoins to pay the registration fees, format encoding, hash computing or interface with the witcoin registry service and contract. Note that **we are not supporting originality, novelty, or real property of the knowledge, but instead proof of existence and genuineness of knowledge that is meaningful or useful to peers**.

Keeper. The function of keepers is to safely store the registered wit for long-term digital preservation. When a peer registers a wit into the network, they are given the option to just register the hash and keep the content themselves, or for enhanced safety reasons, to store the wit in the cloud to maintain an unalterable copy of the asset. Keepers build a distributed network of storage that runs in parallel to (and independently of) the blockchain and stores all the wits. Wits might be encrypted to ensure that no peer other than the owners have access to it. Some keepers may also ask for a fee in exchange for their storage services.

Silo. This is a company or organization feature whereby they use the platform to supply their own witcoins to better acknowledge their own employees and their sources (the peers of witcoin at the global scale that provide them).

Miner. All of us wake up and start thinking that maybe this thing with miners does not make sense after all. We decided that miners, following the standard cryptocurrency technologies, have a key place that needs more efficient formulation. They are nodes that help to secure the blockchain by giving computational power to the network and solving the chain blocks. Therefore, miners must be given rewards for their efforts to maintain the network security. If witcoin is deployed as an Ethereum token, there is no immediate need to reward miners with witcoins, since miners are already motivated by the mining and transaction costs of Ethereum. However, a reward in witcoins could help to prioritize witcoin transactions. Moreover, the multitoken feature of witcoin will enable many public and private bodies to supply their own

witcoins to better reflect the wealth they create through knowledge. In all, the witcoin platform might consider, as a future development, its own validation, going across several Ethereum or Aeternity forks, or finally growing enough to tackle and embed those networks.

III. DEFINITION OF WITS

Wits are knowledge that makes sense. Period.

We advocate that the knowledge might make sense when it is communicated to someone else. The knowledge definitely makes sense when someone else cites or reuses it.

There are several ways of proving it is being reused when forwarding it, upgrading it, cross-selling it, acknowledging it and many more disclosing actions, at any forum of whatever dimension.

More precisely, a wit is any piece of any type of knowledge that makes sense to anyone else.

Wits solve the problem of converting knowledge into currency because, once knowledge is disclosed, it could otherwise be copied an infinite number of times, and with such abundance, its value would go to zero. Otherwise, as there is effort to absorb knowledge, this effort becomes an indirect measure of knowledge, as the more knowledge there is, the more there is to absorb. Thus, witcoin is related to the effort of digesting knowledge that makes sense to someone as a measure of the absorption of knowledge because it has made a difference to somebody. Therefore, the more some disclosed knowledge makes a difference to someone else, the greater its acknowledgment in witcoins, which are created specifically to *indirectly* reward this knowledge being ingested (the wits) for greater outputs.

It is remarked that the impact is on someone else as a collaborative creation of value apart from the self-discovery or revelation. Thus, a witcoin is the impact that knowledge might have on another individual, company, or even AI. The more useful it is, the greater the impact and the greater the quantity of witcoins.

In this context, witcoins are designed and deployed to promote and reward individuals for the validation of their wits that contain ideas, creations, and activity with IP assets. We use the wits to organize all knowledge in society by structuring the knowledge from individuals across the borders of organizations. Whenever a user cites someone else's wits, the wit owners will be rewarded to recognize their contribution in the form of wits and their wits' usefulness.

We highlight the impact of knowledge on people at the first instance, then companies, and finally AI bots: this is important for the networked knowledge economy because knowledge generation and ingestion is more and more performed by people on behalf of companies and bots on behalf of people and companies. They are all peers on the witcoin platform.

An exponential societal growth might potentially follow the exponential growth in knowledge. Thus, it is obvious that wits will grow accordingly, without any roof, and they are a natural representation of the societal growth in wealth of any type as a consequence of the knowledge put into action.

Because witcoins are born to recognize the usefulness of wits, we need to define the manner in which their usefulness is determined: Witcoins will recognize that a wit W_A created by X is useful to Y when the latter registers a new wit W_B explicitly citing A. W_B might be: 1) a post in a collaboration space; 2) any content ideated or created thanks to the exposure of W_A to Y; 3) a partnership agreement among different partners where W_A is mentioned; or 4) a scientific publication where W_A is cited. Further cases will be described in the future.
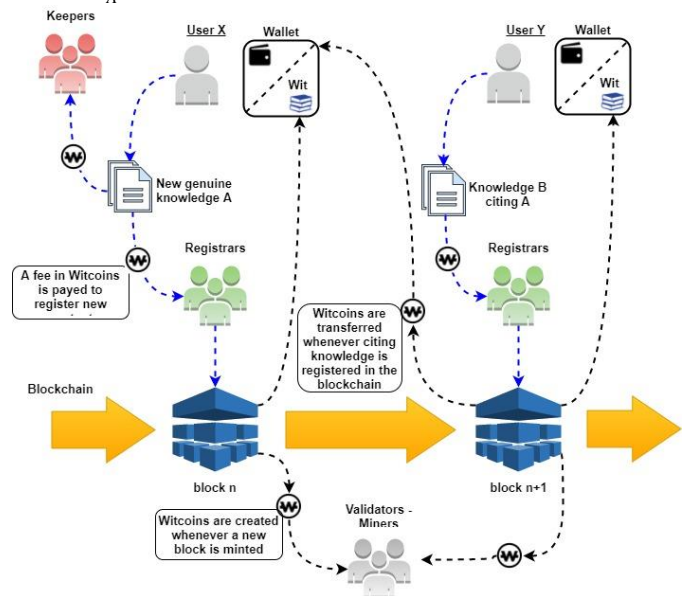

Fig. 2. Schema of the witcoin functionality

IV. THE WITCOINS SUPPLY

Witcoins are supplied FOR the tasks of checking the acknowledgements and validating their transactions. They are created when one or more previously registered wits are acknowledged as useful by someone in its own wit vault (WV). The acknowledgement is typically a citation from new

wits to former existing wits, where amounts of witcoins are automatically transferred every time a newly acknowledged piece of content, a wit, is registered in the blockchain.

There is a key feature that is subtle but important to take into account: **witcoins are paid as the fee for the registration of wits**, so that they are next allocated to the acknowledged sources if they were wits (i.e., they were registered). Witcoins are also paid for checking said acknowledgement transactions and the validation of ordinary transactions, or for keeping the wits in the blockchain activities. While the witcoins are created (supplied) specifically for validation or storage of wits, the witcoins for acknowledgement are not, and thus they need to exist at the registration time; therefore, users get them through purchases or by former acknowledgements to back the creation of new wits.

In a former paper (Szymanski, de la Rosa, and Krishnamoorthy, 2012), we proposed rules for calculating the value of the wits. There, we found the problem of how to achieve stable currency supply, robust against self-citations and circular citations in cliques. We used an algorithm similar to page-rank to calculate how much virtual currency had to be supplied per publication. Today, with the advent of blockchain, the money supply is much easier to calculate without the self-citation risks: acknowledgement is only backed by an existing mass of witcoins, which is used to pay the registration or communication as a fee for registrars and keepers (see Fig. 3). The money supply in witcoins is then allocated to the following options: a) to the miners who are in a lower layer, validating citations and witcoin transfers of all types (acknowledgements or simple transfers); b) to the community to share the benefits of witcoin and grant easier access to the platform to start creating wits; c) to those having a stake in witcoins as a sort of dividend to those who believe in the system; d) as a lottery to anybody willing to enter; and e) whatever combination of the former allocations.
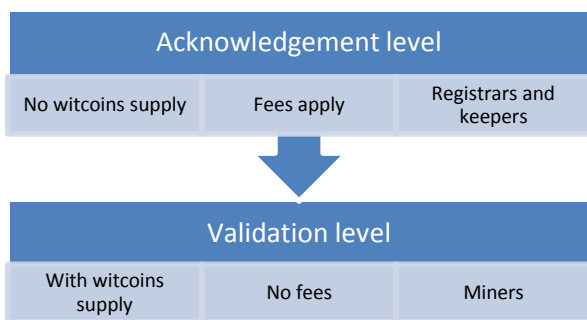

Fig. 3. Two levels of the witcoin platform, where there is only witcoin supply at the validation level.

Therefore, in the witcoins supply, they are created in an amount according to the number of wit validations that will be calculated proportionally to the mass of knowledge disclosed. A disclosure is defined as a communicative action where one party discloses knowledge to a second party. A disclosure could be implemented as a forward in an email or a share in a social network or blog, a retweet on Twitter, a preventive disclosure in a collaborative space such as Nirvana, Hype, or 9sigma, or a corporate social network such as Yammer or Beezy. The witcoins supply will tend to get lower in percentage of the total amount of wits through time as more and more knowledge is being handled in the knowledge economy. As the knowledge K is expected to grow continuously, it is then equally expected that the witcoins will be supplied S in a linear manner, as in Eq. 1,

$$S\ (K(n+1)) = int\ (n\ /\ a), \text{ being } a = 10^9 \text{ wits} \qquad Eq.\ 1$$

and the supply S would be allocated for every a wits.

In addition, a proposal to make linear the supply if we consider the knowledge to grow exponentially is the following supply S formula in Eq. 2:

$$S\ (K(n+1)) = 1/\log\ (K(n)) \qquad Eq.\ 2$$

where K is calculated with the number of registered or disclosed wits that is defined as $K(n) = n/c$, being $c = 10^9$ wits (as K(n) will grow exponentially through time, we modeled it with $n = k \cdot e^t$ with k as a parameter, and t is the time that new wits are being disclosed; when t goes to infinity, $S\ (K\ (n)) = 1\ /\ \log\ (k \cdot e^t\ /\ c) = 1\ /\ k \cdot t$ goes to zero).

This amount might be split into several parts:
   a) A fraction f_1 goes to miners for their work of checking citations and the related witcoin transactions. Normally, $10\% < f_1 < 50\%$
   b) Another fraction f_2 goes to the community of developers of the platform to the witcoin.club. We propose $2\% < f_2 < 20\%$
   c) Another fraction f_3 might be used to reinforce registrars and keepers of new wits, such that they will earn the newly supplied witcoins apart from their regular fees income. Normally, $0\% < f_3 < 20\%$
   d) The remaining fraction f_4 might be used as dividends for those with a stake in witcoins or those having wits. Normally, $0\% < f_4 < 50\%$

The supply S is then split with the following formula:

$$(f_1 + f_2 + f_3 + f_4) \cdot S(K(n+1)) \qquad \text{Eq. 2}$$
$$\text{being } f_1 + f_2 + f_3 + f_4 = 100\%$$

Regarding the Witcoins paid to cited knowledge, they go in equal parts to all the cited authors, unless there exists a smart contract to split it differently. Moreover, the citing mechanism might be fully hierarchical, meaning that the indirectly cited wit sources also get rewarded with a residual 50% up to a threshold of 0.1% (this means that up to 9 levels will be rewarded as $0.5^9=0.195\%$ levels). For example, let us suppose the event in which a wit C is registered to the blockchain citing four existing wits $[B_1\sim B_4]$. With B_1 as one of the cited wits, 25% of the generated witcoins go to reward this knowledge. However, as wit B_1 was also created by citing four other wits $[A_1\sim A_4]$, $r= 50\%$ of this reward goes to the author of B_1, while the other $1\text{-}r= 50\%$ is, by default, equally distributed among the authors of $[A_1\sim A_4]$. The parameter r might be set to any other value of $r < 50\%$.

Registering a new wit in the blockchain is a transaction subject to fees, which go mainly to the owners of formerly registered and here-cited wits. Thus, the registrars are allowed (and encouraged) to apply their own fee (as a percentage of the total fee) in return to the registering service offered. Two rules apply to the defined registration fee: the amount of the fee that is distributed among cited authors always has to be equal to or less than the total registration fee, and the minimum part of the registration fee that goes to the cited authors has to be equal to or greater than one witcoin.

These simple rules introduce rationality to avoid self-citations, cyclic citations, cliques, and more; at the same time, it preserves the aim of money creation with the inception of new knowledge.

The number of witcoins created through mining could be lowered through the complexity of the knowledge network being created as an acyclic graph of citations. Otherwise, the price of registration might follow other policies that might increase or decrease according to community needs, but obviously, we prefer the former option to maintain regular registration policies.

V. USE CASES

In today's networked age, competition is increasingly over platforms. Already, many OI and cooperation platforms play in the market. However, the successful setup and operation of an OI-platform cannot be taken for granted: simple databases where partners look for technological cooperation are proved to often be inflexible and eventually unsuccessful. What are the online values that make a difference? Platforms also rely on the power of network effects: as they attract more users, they become more valuable to the existing users that contribute and consume knowledge. In witcoin, users, the peers, are prosumers of knowledge that cite at the time they coin new wits. Several use cases in the processes they disclose or exchange knowledge through email, social networks, blogs, sites, and corporate social networks might be conceived as Dapps that let registrars offer their services. Let us investigate how witcoin might enable them:

A. Emailing some Knowledge in and across organizations

Joe sends an email to a prospect consultant Josh with some knowledge and takes advantage of this communicative action to register it as a wit by simply CCing a witcoin registrar. The newly generated wit is time stamped, and the sender and receiver are included as metadata of the communication. The consultant Josh forwards the email with a few notes to another staff of Joe's company so that the wit might be useful for him as well. Joe is acknowledged with witcoins, and Josh receives some as well, as everybody is contributing to disseminating useful knowledge that makes sense to someone else.

B. Retweeting

Jim retweets a comment of Joe that made sense to him and his next outcome for an enhanced product he is collaboratively working on with a few other mates. He registers the retweet so that, in the future, the fact that he agreed with or even supported that comment will be registered in the blockchain, and then Joe will be rewarded with part of the witcoins used to register this acknowledgement paid by Jim. On his side, Jim will be acknowledged by this fact, as this comment was useful for the final outcome of the collaborative project, which was agreed to be registered as a consortium agreement.

C. Citing a blog entry

Jake cites a blog entry of Joe and has this citation registered for a witcoins fee. Similar to the former case, Joe is acknowledged, and Jake gets his acknowledgement in the future whether his future outcomes are acknowledged.

D. An IBM tokens story

The Joe mentioned in the first case is an IBM engineer. Thus, whatever witcoins Joe is receiving are then converted by IBM into IBM witcoins (or simply IBMcoins) that are worth double compared to regular witcoins. Joe loves having IBMcoins because they are more reputable, and valuable, than regular witcoins, and they are even more valuable in the market.

Even more, optionally or complementarily, every new wit that Joe comes up with is backed by IBM so that Joe sees how much his wits are worth in IBMcoins, and thus the recognition of Joe's citation is much more valuable. As Joe regularly cites the work of other IBM staff, such as Jacky or Jane, they see their balance in IBMcoins grow, and other people such as Jaden, Jones, and more, who are not IBM people, receive the precious acknowledgement of IBMers and get genuinely important recognition.

E. Registration of One's Own Knowledge and Usefulness Recognition (a sort of preventive publishing)

Peplluis from New York comes up with a new idea to compensate knowledge usefulness using a new virtual currency named witcoin. He registers his new idea using the Knowledge Registration Service (KRS). In this way, he feels protected to talk about this idea by simply self-citing in whatever communication through email, internal or open social networks or chat or blog to others because there will be means to prove he was the first to propose it. The idea is registered as a new wit and inserted into the blockchain. A reference to the wit, as well as the wit itself, is kept in his personal Wit Vault (WV).

Time after that, Peplluis was invited to enter an online social network to explore collaboration with partners. Victor from Spain invited him because he needed an expert on virtual currencies, and he found Peplluis in an expert finder tool. Peplluis entered the social network and linked it to his WV. In the social network, Victor gave the details of his need, and Peplluis decided to disclose some of his previous knowledge. To do so, he selected a few related wits from his WV, including the wit referring to the wit idea. For each wit, Peplluis provided not only the knowledge but also the reference to the blockchain transaction that proves its genuineness.

Victor analyzed the provided knowledge and decided to continue with the collaboration. They decided to sign a partnership agreement to license Peplluis technology. In the moment when the partnership agreement was registered by

Victor as a new wit, Peplluis was rewarded with a certain amount of the witcoins paid by Victor's registrar (thus, it is indirectly paid by Victor) as a recognition that his knowledge was useful to Victor or the new partners.

### F. Registration and Referral of Joint Knowledge

Paulo from Colombia and Marc from Spain are engineers with strong knowledge in blockchain and smart contracts. They meet in a blockchain event and decide to start discussing the design of a virtual currency to recognize knowledge usefulness. They use an online collaboration tool to explore collaboration.

Paulo and Marc each have their own previous knowledge in the field, and they have registered some wits (as described in Use Case A). They both connect their WIV into the collaboration tool and disclose their contributions in terms of previous knowledge towards their common goal. After doing so, they continue discussing, sharing documents and exchanging messages within the online tool. At a certain point, they realize that they have jointly come up with something of great impact. Thus, they decide to register it using the registration service. To do so, they need to specify the scope of their new wit and a few more details, including a percentage of ownership of the wit. Additionally, a copy of all the interactions held within the collaboration tool is included with the info being registered, which is formalized through a specific XML-based file format. Once registered, they both have the new wit in their WVs.

Days later, Marc decides to publicly disclose their findings to Max from Sweden, a consultant giving advice to several companies. Max meets someone from a company interested in knowledge-based currencies and makes a referral to Marc, who is then contacted by the company. After some discussion, Marc agrees to join a consortium of partners to develop a joint project where he contributes the aforementioned wit. Marc and Paulo are rewarded by someone with a certain amount of witcoins as a recognition that their knowledge was useful. Perhaps Max would be as well rewarded if Marc and Paulo or the company acknowledge him later on.

G. Bots

A bot can find and refer content, people, partners, financing, etc. similarly to a consultant, developing today's data mining or Autonomous Learning in the future. The owner of the bot might be rewarded as well for the wits generated by the bot
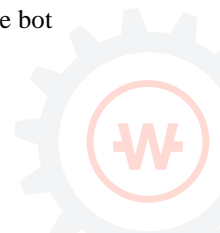
and get long-term rewards in witcoins, as we stated in a former paper (Moreno, de la Rosa et al., 2009).

For example, let us imagine a scoring bot that is always generating useful information to reduce the financial risks (defaults) of companies that are granting loans to individuals or companies. This bot today is just an algorithm that, in novel way, uses social information available online without any need to ask for permission because it is public. The bot generates leads that are several times more profitable than existing technologies. A lead would be something like: 'Jon Garcia Tsing-Hua' has a social score of 9 (out of ten). This piece of knowledge is a wit for newly created fintech companies or consumer-goods companies wishing to sell at credit and might be well worth some witcoins.

VI. PROOF OF WORK AND PROOF OF REPUTATION OR TANGLE

If the witcoins are implemented on an independent blockchain platform, the validating nodes will develop the PoR – Proof of Reputation, an evolution of the Proof of Authority [3] or the Tangle [Popov 2016]. If the witcoins are implemented as Ethereum (and relative) tokens, the Proof of Work will tie the witcoin supply to a similar mathematical formula through "merged mining" with ether, meaning that anyone who finds a block on Ethereum would also get a reward from witcoin, given that the token contract calls a reward function on that block. This can be done using the special keyword coinbase that refers to the miner who finds the block.

VII. ROADMAP

At the beginning, the platform will contain little knowledge, and thus the witcoins will be of inherently low value (little knowledge and thus little value), which will grow as long as more and more knowledge is collected. Witcoins value will grow according to the networked knowledge effect captured by the platform. The First Witcoin Emission (FWE) will hold a part for a single reserve in Ether, Bitcoins, Dash, Zcash, SIA, monero, aeons, Polibius, and MIOTA, and in Bancor, waves, and Aragon tokens, and another part that will not be backed by any other virtual currency will be devoted to the developers.

The ICO in phase 1 will be sold in a fundraiser scheduled for October 15, 2017 10:00 GMT, in Phase 2 scheduled for April 15, 2018 10:00GMT, and a likely Phase 3 scheduled for October 15, 2018.

A. *Witcoins Crowdsale Objectives*

In the first phase, 8,000,000 witcoins will be offered; in the second phase, 80,000,000 WTC; and in Phase 3, another 200,000,000 WTC, yielding a total of 288,000,000 witcoin tokens. No more tokens will be created, and the unsold ones will be destroyed. The number of supplied witcoins are related to the number of wits being disclosed, that is the number of ideas being worth to be shared that will be being collected in the platform, that those few hundred million will be the seed of several billions of stuff that makes sense in few years. A likely price for phase 1 will be 1 ETH=888 WTC; for phase 2, it will likely be 1 ETH = 222 WTC; and (only likely) for phase 3, it will be 1 ETH = 88 WTC

A portion of the funds raised will be used as the Ether reserve for FWE (details on the ICO will be outlined in the crowdsale launch announcement), enabling continuous liquidity to Ether and the other altcoins and tokens, for any FWE holder, as well as any holder using FWE as a reserve.

A portion of the funds will be used to set up and propel the first batch of peers and the first development team. This model introduces key advantages, incentivizing wit creation representing additional real-world assets.

A portion of the funds will be used to develop, promote and support the open-sourced, blockchain, witcoin protocol implementations and support related technologies and applications, such as an open-source, user-friendly web service (desktop and mobile) to provide wallet, marketplace, and knowledge solutions.

A small portion of the funds will go to the promoter team.

Another portion will go to the witcoin.club for marketing and general management of the witcoin platform.

A final portion of the funds of phase 2 and more extensively of Phase 3 will be used to participate in and support innovative and promising future knowledge services in the witcoin platform. These may include new money-as-a-service solutions, big data services, location-based and vertical-specific initiatives such as business token networks, community currencies, crowdfunded projects and other online or offline knowledge-based ecosystems.
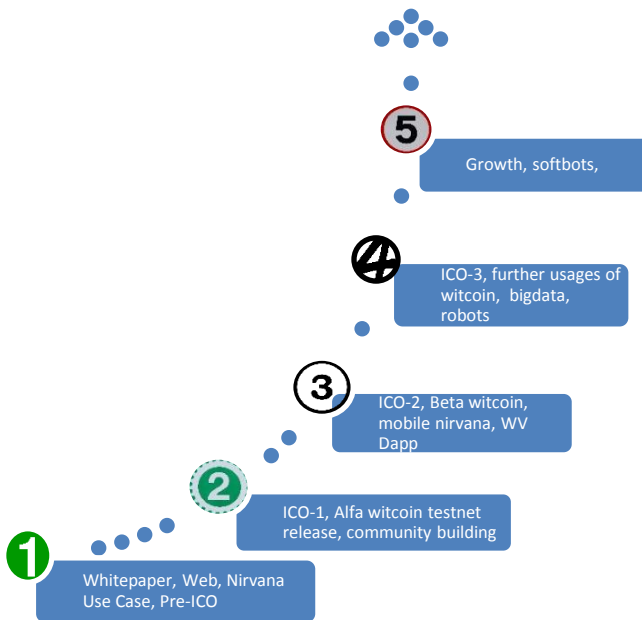
B. *The brief technological roadmap*

The road to creating a knowledge-backed currency involves many different aspects, such as integration (layered), compliances, technologies, consortia and creativity.

Below, you can see the milestone roadmap that covers the most significant levels of financial activity that we will be

achieving with our ICO. Every milestone is meant to be incremental to the preceding one and to be implemented according to the market response to the proposals.

ICO proceeds are intended to be spent mainly, but not exclusively, on building out the systems, hiring the team, marketing, and community building.

Growth, softbots,

ICO-3, further usages of witcoin, bigdata, robots

ICO-2, Beta witcoin, mobile nirvana, WV Dapp

ICO-1, Alfa witcoin testnet release, community building

Whitepaper, Web, Nirvana Use Case, Pre-ICO

At Witcoin.club, we will rely on a set of networked and crowd milestones to comply with the necessary network effect of the witcoin.

Every milestone step is an advancement to a broader set of services at the disposal of witcoins users, our precious peers. While our first user case of nirvana for digital consulting technology will serve as a platform at the core of the witcoin.club, other features will be developed independently. During this process, the ecosystem will be formed, and witcoin will start its primary day-to-day operations.

For the customer base, witcoin strategic partners will provide an initial base of users. We expect access to 2,000 companies and organizations and 500,000 peers in milestone 3. This will give us a strong base for growth and a quicker path to building revenues and profitability.

GLOSSARY

Wit – Knowledge that makes sense
Witcoin – Currency used to acknowledge that a wit has made sense to someone else.

Citation – whenever a peer acknowledges a wit because of having found it useful.
Disclosure – Action of showing a wit to a peer [so that he or she might cite it in the (close) future]
AI – Artificial Intelligence

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