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A Distributed Economy Network

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The Token Classification Framework: A multi-dimensional tool for understanding and classifying crypto tokens.

January 18, 2018 by Thomas Euler

The development of the framework presented in here was a collaborative effort between me and several of my Untitled INC fellows. Peter Trapp was heavily involved in all aspects of the creation, including lending his surprising design prowess to it. Prof. Dr. Andranik Tumasjan of the University of Mainz (and formerly Technical University Munich) provided very valuable feedback and ideas, as did Dr. Oliver Krause, Dr. Karl-Michael Henneking and Daniel Pichler.

About

Untitled INC is a network organization dedicated to the distributed economy and blockchain. Our Blog is the hub for publications by our

Blockchain, ICOs and bitcoin's wild ride have been some of the hottest tech topics in 2017. Yet, while people spent billions of dollars on cryptographic tokens, the understanding of the different token types out there is still limited. Even among regular investors and long-standing members of the blockchain community.

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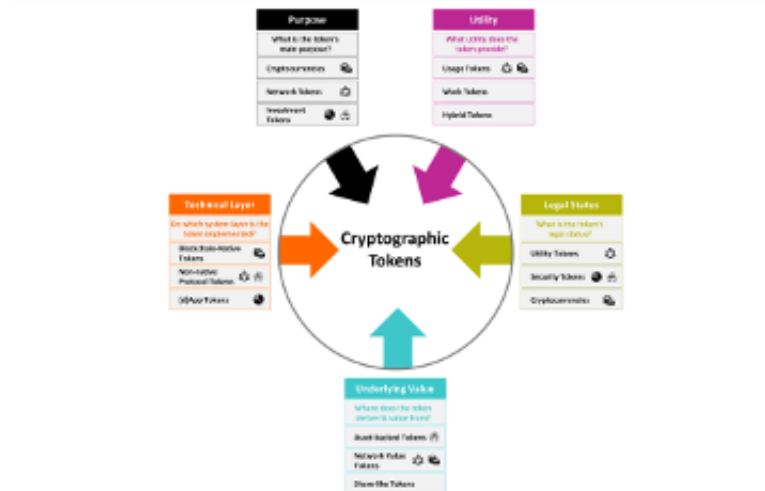
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TOKEN CLASSIFICATION FRAMEWORK

FIVE DIMENSIONS OF TOKENS



MAIN TOKEN TYPES PER DIMENSION

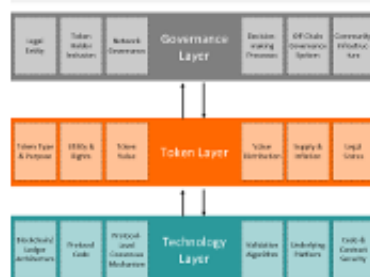
Technical Layer	Purpose	Underlying Value	Utility	Legal Status*
Blockchain-Native Tokens Description: A token that is implemented on the blockchain or the production of a blockchain. Characteristics: <ul style="list-style-type: none"> Must be native to the blockchain Require a computer or the blockchain's consensus mechanism Not subject to the blockchain's consensus mechanism for block validation/other nodes Examples: BTC (Bitcoin), ETH (Ether), XRP (Ripple), XMR (Monero), etc.	Cryptocurrencies Description: A token that is intended to be a "peer-to-peer" digital currency. Characteristics: <ul style="list-style-type: none"> Intended as a digital medium of exchange Require a consensus mechanism Examples: BTC (Bitcoin), ETH (Ether), XRP (Ripple), etc.	Asset-backed Tokens Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.	Usage Tokens Description: A token that provides access to a digital service or utility. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: ETH (Ether), XRP (Ripple), etc.	Utility Tokens Description: A token that provides access to a digital service or utility. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: ETH (Ether), XRP (Ripple), etc.
Non-native Protocol Tokens Description: A token that is implemented on a blockchain or the production of a blockchain. Characteristics: <ul style="list-style-type: none"> Require a computer or the blockchain's consensus mechanism Not subject to the blockchain's consensus mechanism for block validation/other nodes Examples: ETH (Ether), XRP (Ripple), etc.	Network Tokens Description: A token that is intended to be a "peer-to-peer" digital currency. Characteristics: <ul style="list-style-type: none"> Intended as a digital medium of exchange Require a consensus mechanism Examples: BTC (Bitcoin), ETH (Ether), XRP (Ripple), etc.	Network Value Tokens Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.	Work Tokens Description: A token that provides access to a digital service or utility. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: ETH (Ether), XRP (Ripple), etc.	Security Tokens Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.
Off-Chain Tokens Description: A token that is implemented on a blockchain or the production of a blockchain. Characteristics: <ul style="list-style-type: none"> Require a computer or the blockchain's consensus mechanism Not subject to the blockchain's consensus mechanism for block validation/other nodes Examples: ETH (Ether), XRP (Ripple), etc.	Investment Tokens Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.	Share-like Tokens Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.	Hybrid Tokens Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.	Cryptocurrencies Description: A token that represents a claim on an underlying asset. Characteristics: <ul style="list-style-type: none"> Often backed by a real-world asset (e.g., gold, real estate) The token is responsible for the underlying asset's value Require a consensus mechanism Examples: GUT (Gold-backed Token), RST (Real Estate-backed Token), etc.

*Legal status depends on jurisdiction

TOKEN ARCHETYPES

Crypto-currency • Used as a store of value or a medium of payment, with all of its benefits. • Not issued by a central authority. • Can be mined or generated.	Tokenized Asset • Asset backed by a real-world asset, such as a share or a commodity. • The underlying asset needs to be held by the issuing party. • This introduces counterparty risk, contrary to cryptocurrencies.	Tokenized Platform • Platform-like network, not owned & operated by a single entity. • Before users had limited roles in a platform, now roles are distributed and available to every network participant. • No fee (financially) flows freely through the network.	Token-as-a-share • A tokenized instrument to invest in companies (though it is currently not regulated based on the nature of the instrument of stock and currency (e.g., SEC reporting, IPO)). • Shares or tokens (tokens, programmatic via smart contracts). • Currently, a highly volatile market (due to its regulatory framework) and only beginning to develop.
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DLT SYSTEM LAYERS



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Introducing Untitled INC: A Network Organization Dedicated to the Distributed Economy & Blockchain Space.

The Token Classification Framework: A multi-dimensional tool for understanding and classifying crypto tokens.

Categories

One reason for it — a quite common one in emerging domains — is the lack of clear, generally agreed upon

terminology and definitions. For instance, I regularly come across people who refer to all tokens as “cryptocurrencies”. Which, as we are going to see in a minute, isn’t precise. Which is somewhat problematic because precision in language and terminology is the basis for an informed, nuanced dialogue and good analysis.

Whether you want to develop a token or evaluate one, it’s critical to understand the nuances of the subject. Moreover, the blockchain community is growing and maturing. As a result, it is increasingly getting in touch with “the real world” (aka people who are new to the subject). Investors, regulators, politicians and decision-makers in businesses are all taking the space increasingly serious. Many are in the process of formulating their positions and strategies for dealing with the subject. Clarity and accessibility of relevant knowledge are key to allowing those actors to make good, informed decisions.

This is why we, the Untitled INC team, set out to develop a framework that a) reflects the various existing token types, b) allows to classify and analyze tokens in various relevant dimensions, and c) fosters a better, nuanced understanding of crypto tokens. Today, we are presenting the first iteration of the Token Classification Framework, the result of our effort. In this post, I’m going to walk you through the framework and explain the work and thinking that went into it.



Blockchain
Tokens
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Archives

February
2018
January
2018

Introductory Remarks

Before we get into the framework, some technical and procedural remarks.

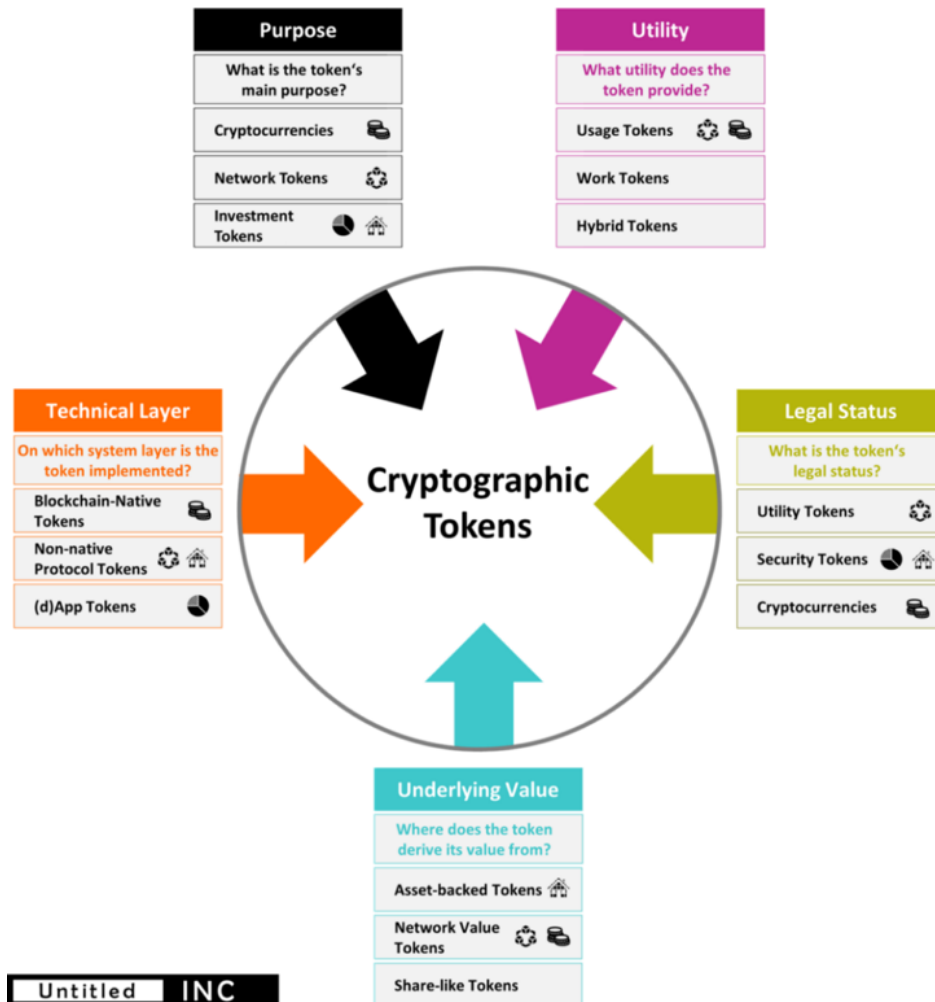
To develop the framework, we reviewed a lot of work on tokens that had already been put out there. Many smart people published very helpful thoughts and ideas which influenced our thinking and chosen terminology. You'll find a list of references at the end of this article.

The version of the framework in this article is version 1.0 of the Token Classification Framework (TCF). The crypto space is moving at a rapid pace, so we expect to see new developments and innovative approaches to tokens quite frequently. Thus, we regard the framework as a living document. The version in this article shall serve as a point-of-reference going forward, so we won't update the TCF in here. Instead, we'll host and maintain the most current version [on our website](#).

Last but not least, we decided to turn the future development of the framework into a collaborative endeavor. Which is why we are releasing the framework under a [Creative Commons BY-NC-SA](#) license. This allows the community to iterate on the framework and contribute to its development. Also, your feedback is highly welcome so please leave your feedback in the comments below.



Classifying Tokens in Five Dimensions



There are multiple angles from which you can look at tokens. Back when we began working on the framework, we quickly realized that it would have to cover multiple perspectives in order for it to be useful. After reviewing the current literature and analyzing dozens of whitepapers, we distilled five major dimensions which we wanted to reflect in the framework: a token's purpose, utility, legal status, it's underlying value and the technical layer it's implemented on.

Purpose. What is the token's main purpose? What is it designed to do? This dimension illustrates why the people who call any token a cryptocurrency err. Tokens *can* certainly be intended as a *cryptocurrency*. But often

they are meant to enable a specific network and catalyze its growth (*network tokens*) or merely present a way to invest in an entity or asset (*investment token*).

Utility. The term “utility token” has become commonplace¹ but there are various types. When looking at different tokens, you’ll find many approaches to creating utility for token owners. But on an abstract level, there are two major ways to provide utility: by giving access to network or service features (*usage tokens*) or by allowing token holders to actively contribute work to the system (*work tokens*). Some tokens do both (*hybrid tokens*) and some tokens don’t provide any utility at all².

Legal Status. The legal perspective is extremely relevant as of now, so it is reflected in the framework. The category’s content, however, is expected to change quite a bit in the upcoming months as it is a volatile environment and more regulation is expected to emerge. Moreover, every jurisdiction can differ. The general outline of the current state in multiple countries is that tokens which aren’t clearly a utility token — i.e. a means to access features of a network/service — or which aren’t a pure *cryptocurrency* can easily be classified as a *security token* by regulators. In some jurisdictions, such as Germany, there is some definition by regulators as to what constitutes a *cryptocurrency*. Several cases we found hover between two types, due to fact that current legal frameworks have been created before tokens existed and most haven’t been updated so far. (This isn’t legal advice.)

Underlying Value. Most tokens are created to have a monetary value. But the sources of their value differ

considerably. Some basically work as IOUs to a real-world asset which they are tied to (*asset-backed tokens*). Others showcase stock-like properties as they are linked to the commercial success of the issuing entity. Those *share-like tokens* would be regarded as securities in most jurisdictions (actual enforcement by the regulator is a different subject). Finally, there are tokens which are tied to the value of a network, not a central entity (*network value tokens*). The latter might be the hardest to wrap one's head around and the most interesting value source at the same time.

Technical Layer. Tokens can be implemented on different technical layers of blockchain-based systems: on the blockchain level as the chain's native token (*blockchain-native tokens*), as part of a cryptoeconomic protocol that sits on top of the blockchain (*non-native protocol tokens*), or on the application level (*(d)App tokens*).

It's important to note that the dimensions are complementary. Most tokens can be assessed in all dimensions and, as we'll see when looking at the archetypes, there are strong correlations between some types in different categories.



Main Token Types per Dimension

In any dimension, we identified various token types, summarized their main characteristics and included relevant examples. You can find the result in the graphic

below.

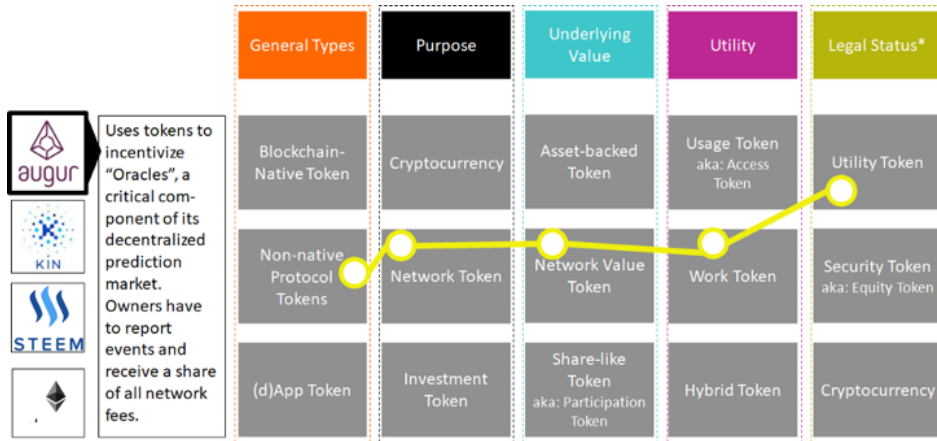
MAIN TOKEN TYPES PER DIMENSION				
Technical Layer	Purpose	Underlying Value	Utility	Legal Status*
Blockchain-Native Tokens <p>Description: A token that is implemented on the protocol-level of a blockchain</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Critical to operate the blockchain • Integral component of the blockchain's consensus mechanism • Part of the blockchain's incentive mechanism for block validators/other nodes <p>Examples: BTC (Bitcoin, Bitcoin), ETH (Ether, Ethereum), STEEM (Steem, Steem)</p>	Cryptocurrencies <p>Description: A token that is intended to be a "pure" cryptocurrency</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Intended as a global medium of exchange • Functions as a store of value <p>Examples: BTC (Bitcoin), ZEC (Zcash), KIN (Kin, KIN)</p>	Asset-backed Tokens <p>Description: A token that functions as a claim on an underlying asset</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Allows trading via IOUs without actually having to move the underlying asset • The issuer is responsible to hold the underlying asset • Introduces counterparty risk <p>Examples: USDT (Tether USD, Tether), GOLD (GOLD, GoldMine), Ripple IOUs (Ripple)</p>	Usage Tokens <p>Description: A token that provides access to a digital service, similar to a paid API key</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Grants holders access to exclusive functionality of the service <p>Examples: BTC (Bitcoin), STX (Stacks, Blockstack)</p>	Utility Tokens <p>Description: A token offering owners clearly defined utility within a network or (decentralized) application</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Closely tied to the functionality of the issuing network or application • Internal network/app currency but not necessarily attempting to be a currency • Grants owners the right to actively contribute to the system vs. passive investor role • Avoids security-like features <p>Examples: GNO (Gnosis), STEEM (Steem)</p>
Non-native Protocol Tokens <p>Description: A token that is implemented in a cryptoeconomic protocol on top of a blockchain</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Integral component of the protocol's consensus mechanism • Part of the protocol's incentive mechanism for nodes • Tracked on an underlying blockchain to which it is not integral (e.g. ERC20 Tokens on Ethereum) <p>Examples: REP (Decentralized Oracle Protocol, Augur)</p>	Network Tokens <p>Description: A token that is primarily intended to be used within a specific system (e.g. network, application)</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Token has functionality within the issuers system • Not intended as a general cryptocurrency <p>Examples: GNO (Gnosis), STX (Stacks, Blockstack)</p>	Network Value Tokens <p>Description: A token that is tied to the value and development of a network</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Tied to the value generated and exchanged on the network (e.g. transaction fee volume) • Closely intertwined with key interactions of network participants <p>Examples: ETH (Ether, Ethereum) STEEM (Steem)</p>	Work Tokens <p>Description: A token that provides the right to contribute to a system</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Owning Tokens is the precondition for contributing to the system • Contributions are either incentivized with a rewards system or holders get utility from the system/decentralized organization <p>Examples: REP (Reputation, Augur), MKR (Maker, Maker DAO)</p>	Security Tokens <p>Description: A token that behaves like a security</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Showcases security-like features, e.g. voting on decisions regarding the issuing entity, dividends, or profit shares • Holders are regarded as owners • Little or insufficient utility <p>Examples: SPICE (SPICE VC), Bitwala (Itba)</p>
(d)App Tokens <p>Description: A token that is implemented on the application-level on top of a blockchain (and potentially protocol)</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Integrated within the application • Part of the app's incentive mechanism for nodes and/or users • Tracked on an underlying blockchain to which it is not integral (e.g. ERC20 Tokens on Ethereum) <p>Examples: WIZ (Wisdom, Gnosis), SAFE (Safecoin, SAFE Network)</p>	Investment Tokens <p>Description: A token that is primarily intended as a way to passively invest in the issuing entity or underlying asset</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Promises owners a share of asset value or in (future) success of the issuing entity • No or little significant functionality <p>Examples: Neufund Equity Tokens (Neufund), DGX (Digix Gold, DigixDAO)</p>	Share-like Tokens <p>Description: A token with share-like properties</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • The issuer promises token owners a share in the success of the issuing entity (e.g. dividends, profit-shares) • May or may not come with voting-rights • Mostly on no/weak legal basis <p>Examples: DGD (DigixDAO), LKK (Lykke) Likely to be classified as a security token</p>	Hybrid Tokens <p>Description: A token featuring traits of both usage and work tokens</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Grants access to system functionalities • Allows owners to contribute to the system <p>Examples: ETH (Ether, Ethereum, after Casper), DASH (Dash)</p>	Cryptocurrencies <p>Description: A token that is a pure cryptocurrency</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Acts as a store of value and medium of exchange • Not emitted by a central authority against which owners have claims • In Germany (according to BaFin): currently not regarded as lawful, functional currency • not regulated by e-money laws <p>Examples: BTC (Bitcoin), ZEC (Zcash), LTC (Litecoin)</p>

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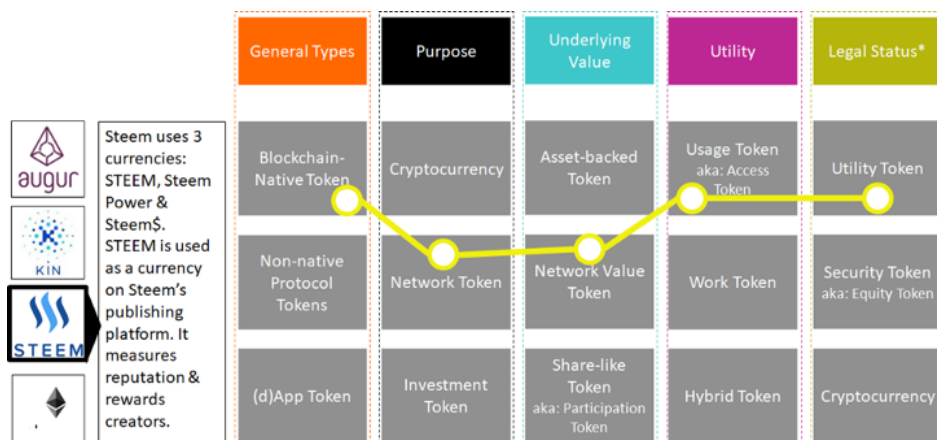
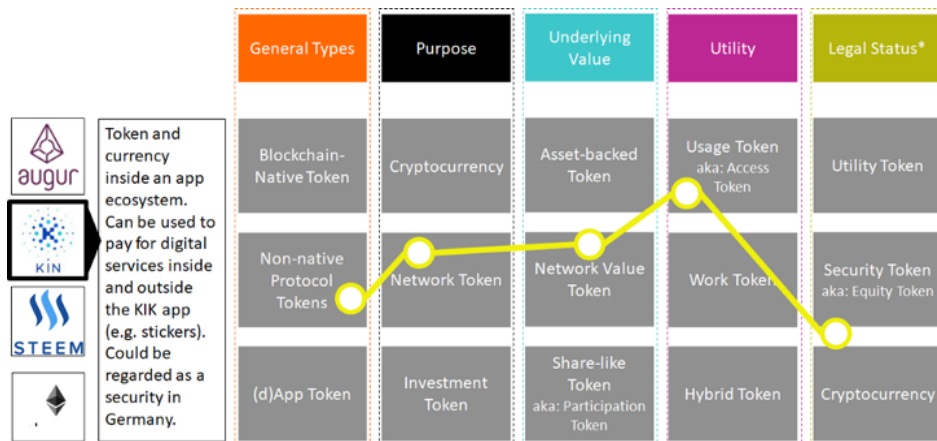
*Details dependent on respective jurisdiction

Putting the TCF to the Test

A granular framework like this allows us to understand a given token with a higher degree of precision. In order to put the framework to practice, we looked at several tokens and classified them. You'll find some examples from a recent workshop we held below:



As the first chart shows, you could call Augur's REP a *Non-native-protocol-Network-Network-value-Work token* that would likely classify as a *utility token*.



Let's stop here. If you are interested in playing around with the framework, you might want to start with

Ethereum and classify it yourself.



Archetypes

After using the framework to classify a fair number of tokens, some patterns emerged (unsurprisingly). As I said before, there are some rather obvious correlations between different token types. For instance, many *network tokens* (by *purpose*) will also be *network value* tokens, i.e. their value is tied to the value of the network they are used within. Similarly, an *investment token* will basically never be a *network value token* but either *asset-backed* or *share-like*. We looked at those patterns and derived some archetypes.

Each archetype is represented by an icon. The icons are also included in the main table above, next to the token typology usually associated with a respective archetype. A description of each archetype is included in the graphic below:



ARCHETYPES



Crypto-currency

- Used as store-of-value or means-of-payment; unit of account
- Not issued by a central authority
- Can be mineable or pre-mined



Tokenized Asset

- Gives access to assets like gold, even in a micro transaction scale
- The underlying asset needs to be held by the issuing party
- Thus introduces counterparty risk, contrary to cryptocurrency



Tokenized Platform

- Platform-like network, not owned & operated by a single entity
- Before users had limited roles in a platform, now roles are distributed and available to every network participant
- Value (financial/utility) flows freely through the network



Token-as-a-share

- A tokenized instrument to invest in companies (though currently on no regulated basis) that has characteristics of stock and currency (e.g. ICO replacing IPO)
- Shares on steroids: flexible, programmable via smart contract
- Currently a highly uncertain token class as regulatory frameworks are only beginning to emerge

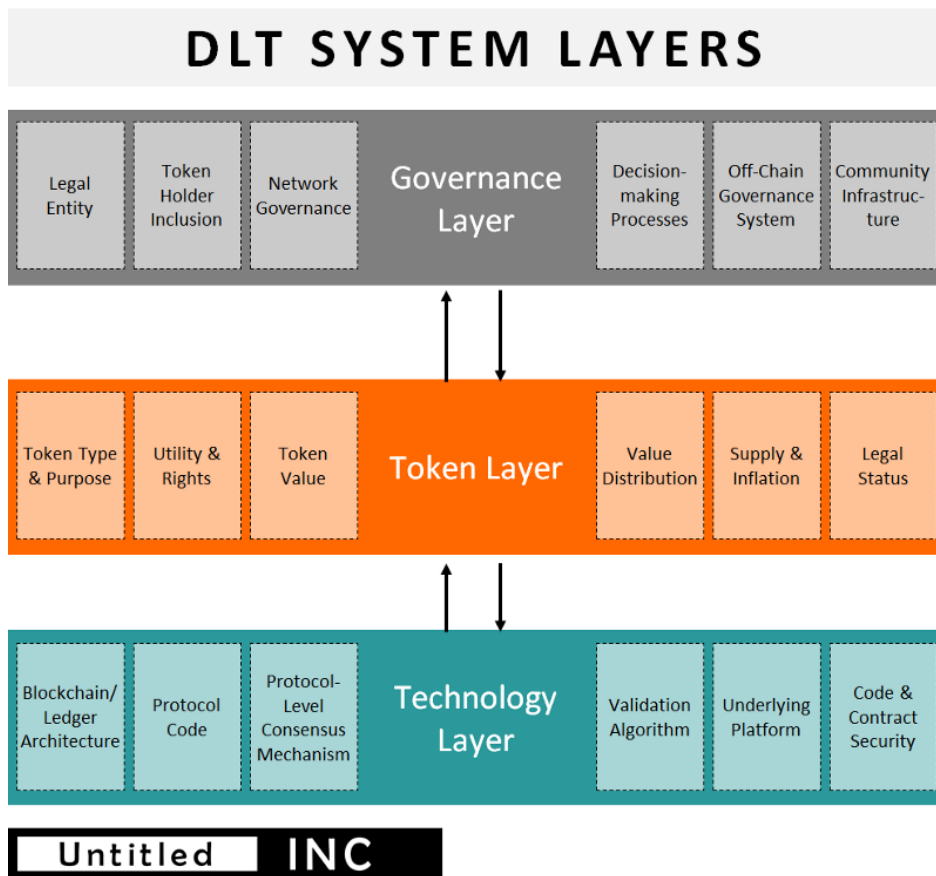


The Wider Context

We think the TCF is useful to classify and create more clarity around the various token types you can find today. Still, it is important to note that it isn't enough to merely analyze a token.

Crypto tokens don't exist in isolation but are only one component of a distributed ledger system. While tokens are an integral component of the system — as they are critical to establishing a cryptoeconomic dynamic — the *token layer* is only one of three system layers. The others are the *governance* and *technology layer*, which are connected by the token. I won't go into detail on the model below, as it merits its own post in the future. For

now, it's enough if you keep in mind that any assessment of a DLT project shouldn't exclusively focus on the token but look at the entire system.



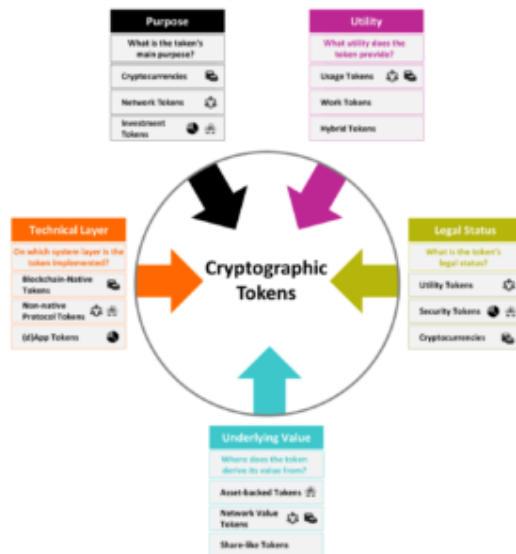
The Complete Token Classification Framework

Now that you are familiar with the different components of the TCF, you can find the complete framework below in high resolution. As it is published under Creative Commons, feel free to share and iterate on it. Just don't forget to link back to us. And if you have comments or suggestions for further improvements to the framework, please let us know.

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TOKEN CLASSIFICATION FRAMEWORK

FIVE DIMENSIONS OF TOKENS



MAIN TOKEN TYPES PER DIMENSION

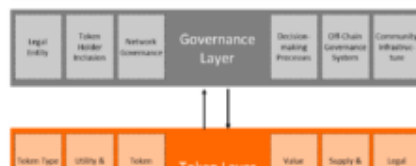
Technical Layer	Purpose	Underlying Value	Utility	Legal Status*
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Non-native Protocol Tokens Description: A token that is implemented as a cryptocurrency protocol on top of a blockchain. Characteristics: <ul style="list-style-type: none"> • Integral component of the protocol's consensus mechanism • Part of the protocol's incentive mechanism for nodes • Tied to an underlying blockchain to which it is not integral (e.g. ERC20 tokens on Ethereum) Examples: REP (Decentralized Oracle Network, Augur)	Network Tokens Description: A token that is primarily intended to be used within a specific system (e.g. network, application). Characteristics: <ul style="list-style-type: none"> • Token has functionality within the issuing system • Not intended as a general cryptocurrency Examples: GNO (Gnosis), SNT (Status Network), Blockstack	Network Value Tokens Description: A token that is tied to the value and development of a network. Characteristics: <ul style="list-style-type: none"> • Tied to the value generated and exchanged on the network (e.g. transaction fee volume) • Clearly intertwined with key interactions of network participants Examples: ETH (Ether, Ethereum), STEEM (Steem)	Work Tokens Description: A token that provides the right to contribute to a system. Characteristics: <ul style="list-style-type: none"> • Creating tokens is the prerequisite for contributing to the system • Contributions are either incentivized with a reward system or tokens get utility from the system/decentralized organization Examples: REP (Reputation, Augur), MMR (Master, Master, MMR)	Security Tokens Description: A token that behaves like a security. Characteristics: <ul style="list-style-type: none"> • Mimics security-like features, e.g. voting on decisions regarding the issuing entity, dividends, or profit shares • Risks are regarded as owners • Little or insufficient utility Examples: SPICE (SPICE VC), Bitshares (Bit)
(d)App Tokens Description: A token that is implemented on the application level on top of a blockchain (and potentially protocol). Characteristics: <ul style="list-style-type: none"> • Integrated within the application • Part of the app's incentive mechanism for nodes and/or users • Tied to an underlying blockchain to which it is not integral (e.g. ERC20 tokens on Ethereum) Examples: WOT (Windows, Gnosis), SAFE (Status, SAFE Network)	Investment Tokens Description: A token that is primarily intended as a way to passively invest in the issuing entity or underlying asset. Characteristics: <ul style="list-style-type: none"> • Promoter owns a share of value or (indirect) access of the issuing entity • No or little significant functionality Examples: Funded Equity Tokens (Fundus), DGR (Digital Gold, Digital Gold)	Share-like Tokens Description: A token with share-like properties. Characteristics: <ul style="list-style-type: none"> • The token promotes token owners a share in the success of the issuing entity (e.g. dividends, profit shares) • May or may not come with voting rights • Mostly on-regional legal basis Examples: GNO (Gnosis), LSK (Lisk) Likely to be classified as a security token	Hybrid Tokens Description: A token featuring traits of both usage and work tokens. Characteristics: <ul style="list-style-type: none"> • Grants access to system functionalities • Allows owners to contribute to the system Examples: ETH (Ether, Ethereum), after Corgi, (d)App (d)App	Cryptocurrencies Description: A token that is a pure cryptocurrency. Characteristics: <ul style="list-style-type: none"> • Acts as a store of value and medium of exchange • Not controlled by a central authority against which owners have claims (incentive according to hard) • Generally not regarded as fiat-like, functional currency • Not regulated by money laws Examples: BTC (Bitcoin), ZEC (Zcash), LTC (Litecoin)

*Details dependent on respective jurisdiction

TOKEN ARCHETYPES

Crypto-currency	<ul style="list-style-type: none"> • Used as store-of-value or means-of-payment; unit of account • Not issued by a central authority • Can be mineable or pre-mined
Tokenized Asset	<ul style="list-style-type: none"> • Gives access to assets like gold, even in a micro transaction scale • The underlying asset needs to be held by the issuing party • Thus introduces counterparty risk, contrary to cryptocurrency
Tokenized Platform	<ul style="list-style-type: none"> • Platform-like network, not owned & operated by a single entity

DLT SYSTEM LAYERS





As the blockchain space matures, clarity and a precise terminology become increasingly important. With the TCF, we hope to have created a valuable resource that contributes to a better, more nuanced understanding of tokens. As it is now part of the commons, everybody is invited to further improve it.

There are two potential dimensions which we thought about but eventually didn't include in the framework: the *Issuance Approach* and *Supply Structure*. In the case of issuance (ICO, airdrop etc.) it's only a one-off event that we didn't regard as a fundamental characteristic of the token. It doesn't influence how the token behaves long-term. Thus, we eventually decided against including it.

111

might rethink our decision, though.

Sources

Bulkin, Aleksandr; [Cryptoeconomics Is Hard](#); CoinFund; 2017; [Aleksandr Bulkin](#)

Cicero, Simone; [Blockchain Powered Platforms](#); Stories of Platform Design; 2017; [Simone Cicero](#)

Dixon, Chris; [Crypto Tokens: A Breakthrough in Open Network Design](#); Medium; 2017; [Chris Dixon](#)

Mougayar, William; [Tokenomics — A Business Guide to Token Usage, Utility and Value](#); Startup Mangement; 2017; [William Mougayar](#)

Svrinivasan, Balaji S.; [Thoughts on Tokens](#); earn.com; 2017; [Balaji S. Srinivasan](#)

Tomaino, Nick; [On Token Value](#); The Control; 2017; [Nick Tomaino](#)

Various; [A Securities Law Framework for Blockchain Tokens](#) [PDF]; Coinbase; 2016; [Coinbase](#)

¹ Mostly because everybody who performs an ICO emphasizes that the issued token is a utility token in order to avoid being regarded as a security.

² While tokens which don't provide any utility are often frowned upon, that thinking shouldn't be generalized.

While its often a characteristic of scams, an asset-backed token doesn't necessarily *need* any further utility to be legitimate.



Author: **Thomas Euler**

Thomas is an experienced consultant, analyst, and writer at the intersection of tech, business, and the digital economy. He has been researching and regularly covering the blockchain space for several years now as he has long been interested in decentralized systems and new types of organizations.

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📁 Blockchain, Tokens

🔑 cryptocurrencies, cryptographic tokens, framework, TCF, token classification, utility tokens

> Introducing Untitled INC: A Network Organization Dedicated to the Distributed Economy & Blockchain Space.

26 thoughts on “The Token Classification Framework: A multi-dimensional tool for understanding and classifying crypto tokens.”

Pingback: [仮想通貨分類のフレームワーク – なんのためのおかね](#)

**Marty**

January 30, 2018 at 8:54 am | Reply

What is this reddit thread you speak of?

**Thomas Euler**

January 30, 2018 at 11:51 am | Reply

Hi Marty, thanks for hinting me at this. It was actually a lost sentence. It was an initial idea to collect feedback in a Reddit thread, Eventually, though, we figured that sticking to the comment section might be simpler and clutter things less.

**Philipp**

February 2, 2018 at 10:31 am | Reply

Hi Thomas,
great work. Why don't you upload it to medium and steem it.
I ve heard about your framework in the Bundesblock Slack group.

Philipp

**Thomas Euler**

February 2, 2018 at 11:52 am | Reply

Hi Philipp,

thanks, glad you found it helpful! It actually already is **on Medium**. Steemit is a very good idea though (apparently it flies just below my publishing platform radar ^^)! Will put it on there asap. Appreciate the hint 😊

Pingback: **El precio de bitcoin rompe los \$10.000 pero la vida sigue en Blockchain España - 4 resumen Telegram - Blockchain España**

**Gerry Reihsen**

February 2, 2018 at 9:24 pm | Reply

Can't read the chart. Too small in the native webpage and when blown up too pixilated. I'd love to share this with my meetups.

**Thomas Euler**

February 5, 2018 at 7:29 pm | Reply

Hi Gerry, thanks for the hint! That obviously was a mistake and it should be fixed now. If you click on the big graphic at the article's end, you get to another page on which you find the proper file.



Julia Schmoll

February 4, 2018 at 12:35 pm | Reply

great work!



Thomas Euler

February 5, 2018 at 7:31 pm | Reply

Thanks 😊



John S Lee

February 4, 2018 at 6:19 pm | Reply

This is a great article Thomas, have you considered perhaps this could be a foundation to a terminology standard for blockchain

technology? This would be a good submission to the European Commissions exploration into the subject matter as a definition section.



Thomas Euler

February 5, 2018 at 7:49 pm | Reply

Hi John, thanks for your comment!

I think that a clear and agreed-upon terminology is very important indeed. I would assume that it usually emerges once certain actors, particularly academics, begin to establish an “official” terminology for a new field. Sure enough, the framework here is also intended as a contribution to the development of such terminology.

However, I’m not sure you can effectively “standardize” language – you would also have to drive adoption by the community. Which, of course, doesn’t mean that it wouldn’t be helpful to create a resource which suggests a clear terminology, ideally after developing it together with practitioners from the community. If you have any ideas in those regards, let me know. I definitely think that it would be a worthwhile and useful endeavor!

**Philip**

February 5, 2018 at 6:02 am | Reply

Awesome job, gave you a shout out:

<https://www.coinstaker.com/types-of-tokens-the-classification-framework>

Looking forward to the governance part.

**Thomas Euler**

February 5, 2018 at 7:50 pm | Reply

Hi Philip, great! Thanks a lot for spreading the work!

**Nako Mbelle**

February 5, 2018 at 12:59 pm | Reply

This will be helpful for non-technical speculators and investors to better understand the projects they're supporting.

Your contribution will also make it easier to navigate the complexity of the ecosystem.

Thank you.



William

February 5, 2018 at 9:56 pm | Reply

Thanks for the enlightenment. You just made my job of educating customer much easier.



Daniel

February 8, 2018 at 3:46 pm | Reply

Very useful! Looking forward to your follow up work.



Dr. Yeap

February 9, 2018 at 12:13 am | Reply

Dear Thomas and team,

1. This is a wonderful framework. Do continue to improve on it and if possible, provide more examples for the community.

2. To me, the above framework in totality is akin to the Business Model Canvas / Lean Canvas which we use in the entrepreneurship and angel investors communities.

3. Very well done.



Dr. Yeap

February 9, 2018 at 12:21 am | Reply

One more thing, how would you like us to cite/reference this piece of good work?



Thomas Euler

February 12, 2018 at 12:26 pm | Reply

Dear Dr. Yeap,

Thanks for asking! Online, simply link to this article and/or the **maintenance site** and mention Untitled INC (and myself if you need a person as well). In an academic context, the publication should be Untitled INC Blog.

I hope that helps 😊

**Sleem Hasan**

February 10, 2018 at 6:42 am | Reply

Fantastic read, logical and succinct- thanks you
Thomas!

Pingback: [ICO bewerten: Dieses Framework gibt
Orientierung im Token-Dschungel | ❤️ t3n](#)

**Marta Cortina**

February 19, 2018 at 1:30 am | Reply

Hi Thomas,
I find amazing this TCF. I like the clarity,
structure, ideas and chart.
Thank you very much for sharing.

Great job!

**Rui Carvalho**

March 4, 2018 at 4:08 pm | Reply

Great stuff! Congrats.

A minor thing, though, you should make it clear what "DLT" stands for.

Pingback: [What Is Cryptoeconomics - Extensive Resource List To Help Grow Your Knowledge Of Cryptoeconomics & Cryptocurrencies - Soapbox](#)



Carthago

March 15, 2018 at 10:15 pm | Reply

Nice read, Thnx.

Ardor/nxt/ignis fits in all 😊

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