

## SETTING STANDARDS FOR GLOBAL TOKEN MARKETS



#### International Token Standardization Association (ITSA) e.V. i.Gr. Promoting the development and implementation of a standardized approach for the identification, classification and analysis of blockchain- and DLT-based cryptographic tokens Identification Classification Analysis International Token International Token International Token **Identification Number** Classification Database (ITIN) (ITC) (TOKENBASE) Assigning a 9-digit alphanumeric Creating a flexible and Providing reliable gualitative and identifier to all types of extendable framework for the quantitative data on +800 cryptographic tokens for an cryptographic tokens from +30 classification of all kinds of unambiguous identification, exchanges for business and cryptographic tokens according decreased operational risk and to various different dimensions academia in varying granularity increased transparency (economic, technological, legal, and with optional extensions by adjunct data providers etc.)

# While the overall goal of token market standardization is clear, project motivation and sub-goals are diverse



INTERNATIONAL TOKEN STANDARDIZATION



leading to a common understanding

3

### The structure of the International Token Identification Number (ITIN) provides for easy handling and safety



ITIN

INTERNATIONAL TOKEN STANDARDIZATION

## **TP3B-248N-Q**

### **Token ID**

#### 8 alphanumeric characters

#### The unique ID of a token

- 8 alphanumeric capital characters in total
- Excluding the letters "I", "L" and "O" as well as the numbers "0" and "1" to eliminate the risk of a potential confusion with
- 10-2 = 8 numeric characters and 26-3 = 23 alphabetic characters allowing for the distinct identification of (8+23)^8 = 31^8 cryptographic tokens, i.e. > 850 billion
- Generated and assigned at random, and by elimination of ITINs containing real words like "coin" or "bits" for maximum fairness
- ITINs will be assigned to each token currently on the market and also upon request of an issuer before issuance of a new token

### Checksum

#### 1 alphanumeric character

#### The built-in security feature

- Calculated by taking the modulo of the sum of ASCII code values for the positions 1-8 of the Token ID and a reassignment of the ASCII code to the numeric result
- Recalculation of the checksum allows for verification of the correct communication of the identifier

Open and free market standard

- Distinct and clear identification (no duplications)
- Improved safety and transparency

# The International Token Classification (ITC) framework features distinctive advantages over other frameworks





### **Multi-dimensional approach**

- > Classification according to technological, economic and legal dimensions
- > Synoptical design based on current research landscape and existing best-practices

#### **Extensive testing**

- > First classification framework being tested on +800 tokens
- > Continuous back-testing and stakeholder feedback incorporation

#### **Public availability**

- > Free use of the framework for research, education and science
- > Transparent and public documentation

К Л К У

ITC

#### **Continuous extensions**

- Horizontal extension through new dimensions (e.g. also social or geographic dimensions)
- > Vertical extension through a further breakdown of existing token classes

### **Data integration**

- > Integration of qualitative data from the classification work on +800 tokens into TOKENBASE
- > Unique ready-to-use dataset for existing statistical programs (e.g. CSV, Stata, R)









# Each ITC dimension includes highly detailed classes, which can be broken down even further in the future



**Economic purpose Technological setup** Legal claim Industry ITC Class: EP21 ITC Class: TS41 ITC Class: LC31 ITC Class: IN09 Information **Payment token Blockchain-/DL-native No-Claim Token** Token Example: Bitcoin Example: Bitcoin Cash Example: EOS Sub-classes: Sub-classes: Sub-classes: Example: XRP Unpegged payment token · Not existing yet Advertising, Marketing & PR Sub-classes: Pegged payment token Media & Social Media Blockchain (stable coin) IT and Telecommunications • Tangle (DAG) Data Processing & Analysis • etc. • etc **ITC Class: EP22** ITC Class: TS42 ITC Class: LC32 **ITC Class: IN10 Utility token Non-native Protocol Relative Rights Token** Finance and Insurance Token Example: Binance Coin Example: Ethereum Example: Stellar Sub-classes: Sub-classes: Sub-classes: Example: Basic Attention Token Not existing yet Access token Payment Systems & Services Sub-classes: Governance token Exchange, Trading & Settlement ERC20 token Alternative Finance Settlement token • etc. Ownership token Investment Services • etc. ITC Class: EP23 ITC Class: LC33 ITC Class: IN17 Investment token **Absolute Rights Token** Arts, Entertainment and Recreation Example: KuCoin Shares Example: n.a. Example: FunFair Sub-classes: Sub-classes: Asset backed token Not existing yet Sub-classes: Debt token Entertainment & Gaming Derivative token Recreation, Leisure & Travels Equity token Betting & Gambling Fund token • etc.

## The ITC framework provides detailed definitions for the individual classes of each dimension



INTERNATIONAL TOKEN STANDARDIZATION ASSOCIATION

ITC

Economic purpose							
EP	Economic Purpose	What is the economic purpose [1] of the token?					
EP21	Payment Token	A Payment Token is designed to be used as digital currency. As such, a Payment Token (should) fulfill the classic functions of money [2] (at least partially): (1) medium of exchange; (2) unit of account; and (3) store of value. In general, the usage of the token as means of payment is not limited to a specific use case or environment.					
EP21D	Unpegged Payment Token						
EP21E	Pegged Payment Token (Stable Coin)	Pegged payment tokens e.g. fiat- or crypto-backed stable coins					
EP21Z	Other Payment Token						
EP22	Utility Token	An Utility Token is intended to provide a certain sort of utility or right to the token holder within a clearly specified environment (e.g. decentralized network, third-party ecosystem, business relationship or jurisdiction).					
EP22F	Access Token	An Access Tokens is an Utility Token whose primary purpose is to provide access to certain services, goods or resources that are offered in or through the environment that the token was created for.					
EP22G	Governance Token	A Governance Token is an Utility Token whose primary purpose is to provide means or rights to participate in the governance of the environment that the token was created for (e.g. providing the right to vote on decisions concerning the decentralized network).					
EP22H	Settlement Token	A Settlement Token is an Utility Token whose primary purpose is to serve as means for the settlement of transactions within the environment that the token was created for (e.g. purchase of goods or services). As such, a Settlement Token represents a means of exchange within the specified environment (e.g. decentralized network, third-party ecosystem or business relationship).					
EP22J	Ownership Token	An Ownership Token is created for the purpose of managing and transferring the ownership of material or immaterial goods. Thus an Ownership Token could for instance represent an absolute legal right with regards to intellectual property or material objects within the environment of a certain jurisdiction, but also ownership of unique item within the environment of a decentralized network or computer game with no legally binding relative or absolute rights attached					
EP22Z	Other Utility Token						
EP23	Investment Token	An Investment Token is created as financial product or financial instrument for instutional or retail investors.					
EP23K	Asset-backed Token	Asset-backed tokens e.g. tokens backed by commodities, loans, trade receivables					
EP23L	Debt Token	Debt tokens e.g. tokens that mimic bonds					
EP23M	Derivative Token	Derivative tokens e.g. tokens that mimic structered products, futures, options					
EP23N	Equity Token	Equity tokens e.g. tokens that mimic stocks					
EP23P	Fund Token	Fund tokens e.g. tokens that mimic fund shares					
EP23Z	Other Investment Token						
EP99	Other Economic Purpose						

# The ITC framework is extendable (horizontally as well as vertically) and will be updated on a continuous basis





Potential future dimensions of the ITC for a horizontal extension:





Bitcoin (BTC)	Na Syi Ra We	ame:BitcoinITIN:TP3B-248N-Qymbol:BTCGithub:https://github.com/bitcoin/ank:1CMC ID:1/ebsite:www.bitcoin.orgCMC slug:bitcoin
Dimension	ITC class	Rationale
Economic purpose	<b>EP21D</b> Unpegged payment token	Free-floating crypto currency
Technological setup	<b>TS41</b> Blockchain-/DL-native token	Tokens are directly implemented on the blockchain
Legal claim	LC01 No-claim token	Token does neither provide any claim against any counterparty nor an absolute right
Industry	IN1001 Payment Systems & Services	Token is intended as an universal means of payment
Future work	Future work	Future work







In-depth research on the global token economy: synthesis on token characteristics

### **TOKENBASE** sample statistics: a majority of the top 800 tokens are ERC20 Utility Tokens (ITC)



INTERNATIONAL

TOKEN STANDARDIZATION ASSOCIATION

ITSA

### ITSA offers different membership types with staggered fees and varying contexts of use for ITIN, ITC and TOKENBASE



INTERNATIONAL TOKEN STANDARDIZATION ASSOCIATION

50% discount on the membership fee in 2019 & no admission fee, if you apply before 28-02-2019

	Personal membership	Institutional membership				efore 28-02-2019!	
	Private	Academic & non-profit	Business 1-5 FTE empl.	Business 6-25 FTE empl.	Business 26-100 FTE empl.	Business >100 FTE empl.	
Admission	EUR 20 incl. VAT	EUR 100 excl. VAT	EUR 100 excl. VAT	EUR 200 excl. VAT	EUR 500 excl. VAT	EUR 1,000 excl. VAT	
Active membership • full voting rights • active participation in working groups • full use of ITIN, ITC and TOKENBASE	<b>EUR 100</b> p.a. incl. VAT	<b>EUR 500</b> p.a. excl. VAT	<b>EUR 500</b> p.a. excl. VAT	<b>EUR 1,000</b> p.a. excl. VAT	<b>EUR 2,500</b> p.a. excl. VAT	<b>EUR 5,000</b> p.a. excl. VAT	
Supporting membership • no voting rights • only passive participation in working groups • full use of ITIN and ITC; limited use of TOKENBASE	EUR 25 p.a. incl. VAT	EUR 125 p.a. excl. VAT	EUR 125 p.a. excl. VAT	<b>EUR 250</b> p.a. excl. VAT	EUR 625 p.a. excl. VAT	<b>EUR 1,250</b> p.a. excl. VAT	

#### **Disclaimer:**

(1) An ITSA membership does not in any way entitle to the use of ITIN, ITC and/or TOKENBASE.

(2) A private membership allows for the private use of ITIN, ITC and TOKENBASE. An academic & non-profit membership allows for the academic and non-profit use of ITIN, ITC and TOKENBASE. A business membership allows for the commercial and also non-commercial use of ITIN, ITC and TOKENBASE.

(3) The use of ITIN, ITC or TOKENBASE takes place at own responsibility and risk, and cannot result in any legal claim against ITSA or its representatives.



## We would feel honored to welcome you as an associated founding member of ITSA and look forward to receiving your application!

In case you have any further questions, please do not hesitate to contact Constantin Ketz (constantin.ketz@itsa.global).

www.itsa.global