

# Buzzer: Decentralized microblogging platform

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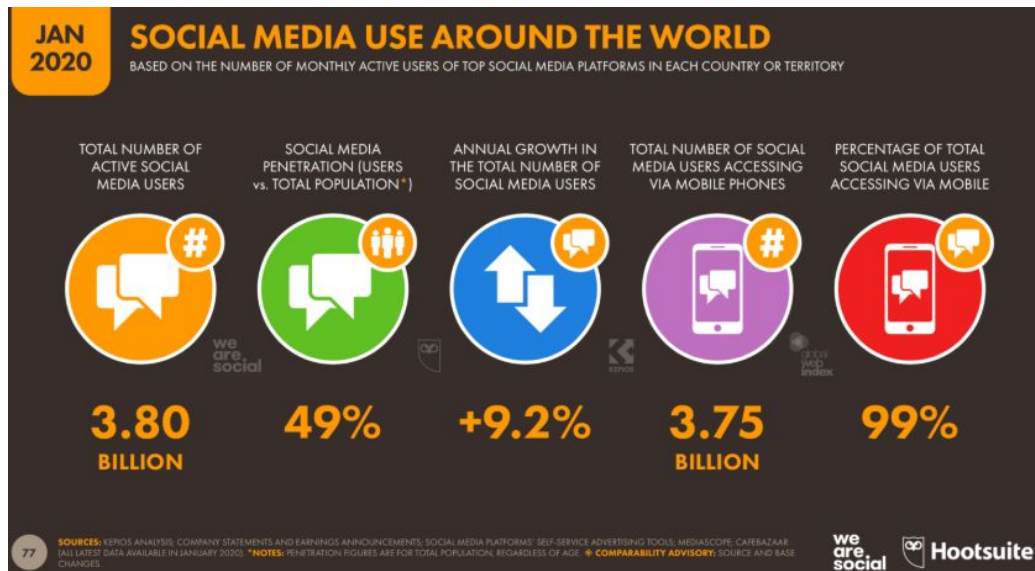
## (1) Intro

Social media and networks are now the new normal, individuals looking to maintain or grow their network (friends, family or professional) and businesses striving to grow their customer base, services or project their culture and reputation now engage their resources in social media communications as a direct channel to reach their customers.

Over the years social networking has grown into a fashionable trend now defined as “an indispensable part of everyday life” with a high rate of adoption. User engagement of technology and the freedom of users to communicate has opened opportunities globally. Users in London can now reach other users within or outside their networks in Asia or South America directly in real time at minimal cost and vice versa.

Social media platforms have seen a record number of users, exponential growth in profit, and some of the richest and most successful companies in the world operate or are linked to the success of social media/network. Facebook, YouTube, Twitter, Instagram, Apple and TikTok are common examples of companies and businesses that have seen explosive growth in users and revenues from the adoption of social media and platforms.

As at January 2020 data shows that 4.5 Billion people are using the internet, with 3.8 Billion actively using social media and 60% of the world's population now online. Social grew by nearly 10% between 2019 and 2020.



## (2) Motivation

The popularity of social media and the rapid growth of companies in this industry have exposed some fundamental flaws in the overall user experience and the distribution of the benefits resulting from its adoption.

Recently, we have seen the battle for control and objection to censorship go up to one of the highest levels of government (the US President) with the key players in the industry enforcing censorship by exercising the power of a centralised authority.

These problems include but not limited to:

- Centralisation of authority
- Monetization of users without consent
- Censorship
- User data compromised

- Intrusion of user privacy
- Limited rights for users
- Little of no financial reward for users
- Lack of trust in social platforms
- External threats to platforms
- Political bias of central authority
- High risk of user restriction
- Hostile takeover of centralised authority
- Data security

And we see the resolution in the following steps, i.e:

### (2.1) Decentralize control

Mentioned flaws in social media platforms and those created by companies and entities that benefit from this growing industry can be resolved with technology.

And we can:

- Build a platform, based on decentralization principles of ownership and governing.
- Build a technology that guarantees that there is no option to get one-man control.
- Build a network that can operate in a potentially untrusted environment, but in the same time have the highest possible security level.

### (2.2) Secure user's data

User data security in a broad sense - is a crucial part of social network.

Centralized governance and authority sometimes pushes service owners and administration to act in gray zone of public service rules. Users' content can be blocked or even removed from the platform without any fair explanations. Such absolute power on the other hand can be very destructive for the platform itself: dozens of hacks of centralized social media platforms have a very high price as for owners and community.

And only technology can help to solve those flaws. And we can:

- Build a social network platform, which secures user data on irreversible manner;
- Build a platform, that gives every single community member the right to influence on overall community policy;
- Establish safe and secured personal communications between community members without involving third party.

### (2.3) Free of speech

Freedom of expression is a fundamental human right. It reinforces all other human rights, allowing society to develop and progress. The ability to express our opinion and speak freely is essential to bring about change in society. Free speech is not only about ability to speak but the ability to listen to others and allow other views to be heard. And with such freedom personal responsibility comes. Responsibility for words that were said and possible consequences.

And technology should help with this. In particular:

- To build a platform, that gives equal rights to all community members.
- To build tools, which guarantee community consensus implementation according to the common policy.
- To develop the technology that will not allow any unilateral change of rules in any way.

### (3) The Idea

As we journey through the 21st century and into the future, it is evident that one of the most important technologies of the future is Blockchain. Currently valued at \$3.0 Billion and projected to reach \$39.7 Billion, growth in the blockchain market is expected to explode with an increasing number of developers and companies adopting the technology in ground-breaking solutions.

DApps or *Decentralized Applications* have been rumoured to become a powerhouse in the future of blockchain solutions, with complete decentralization using peer to peer network, minimal threat of a shutdown by an individual/government and return control to users and the community. One can

begin to imagine the prospects, opportunities, and confidence in blockchain technology and DApps.

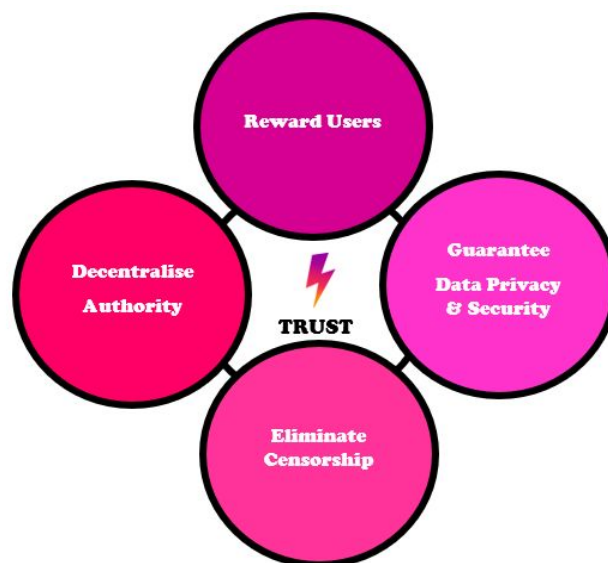
### (3.1) Buzzer

*Buzzer* is a decentralized social media digital application that runs on the Qbit platform. It is built with its users in mind and at the centre from inception, an inspiration transformed into a focused solution to bring social media into the 21st century's hottest tech, to improve user experience and eliminate the major and minor flaws in the current social platforms.

*Buzzer* is designed with focus on five fundamental principles, Decentralised Authority, Reward Users, Guarantee Data Privacy & Security and Eliminate Censorship with Trust as the overarching principle to build user confidence and deliver a memorable user experience.

Users of social platforms have contributed immensely to the adoption at different levels of engagement by uploading creative contents, historical moments, breaking news, photos, articles etc without due reward and credits from the centralised platforms for their contributions.

*Buzzer* has a robust reward mechanism aimed at changing the culture, giving users the opportunity to be rewarded by other users and the whole community.



*Buzzer* eliminates the centralization of power from companies/entities and deliver true decentralization of control and governance into the hands of users, guarantee the security of network and user data, deliver better user experience and network performance whilst encouraging all users (casual or advance) to participate, contribute and benefit from the decentralised network through messaging, networking with friends and family, content creation, recommendation, learning and earn QBITs (the platform's social cryptocurrency).

## (4) Our goals

We see very clearly that only "the technology" will help us to achieve digital equality and fairness. That's why we started this journey.

Primary goals of our initiative are:

- Most importantly is to create a unique set of applications that allows people to establish self-sufficient and sustainable social digital communities.
- Provide tools to allow the community to take control of the rules and infrastructure for digital information exchange.
- To create a decentralized platform that is resistant to external censorship and the imposition of external regulatory rules.
- To create tools and conditions to facilitate and support the development of individual digital entrepreneurship.

## (5) Key features and functionality

### (5.1) Trust Score

One of the central parts of the Buzzer is decentralized governance. Along with decentralized infrastructure it brings real power to the hands of the community. And to give community members - each and all of them - real tools to provide

rightful and conscious policy we have implemented a special model - Trust Score model.

Every “buzzer” or source of information - every social network participant - has a *Trust Score* (TS) integral value. TS is a single essential attribute that directly has influence on buzzer’s behavior. Every buzzer is created with initial  $TS = 1.5$ . That means that buzzer has a *credit of confidence* from up to 5 *virtual voters* (with a single step is 0.1). When  $TS \geq 1.0$  buzzer can make posts, write replies, make rebuzzes and so on. But if  $TS$  becomes less than 1.0 (someone or several members from the community have made “mistrust” actions) - all future activity from this buzzer will be suspended and he/she needs someone to make an "endorsement" to his/her buzzer until  $TS$  becomes higher than 1.0 again.

So,  $TS$  is defined as follows:

$$TS_b = \frac{\sum_{i=0}^n E_i}{\sum_{j=0}^k M_j}$$

where  $E_i$  - all endorse txs for given buzzer,  $M_j$  - all mistrust txs, respectfully.

Each single endorse\mistrust is a special transaction type (TX\_BUSSER\_ENDORSE, TX\_BUZZER\_MISTRUST). And each transaction of mentioned types has a value that is corresponding to the QBITs amount locked within. Thus, every endorsement or mistrust consumes or locks your QBITs, but on a temporary terms. Locked amount - amount of endorse or mistrust transaction - can be available to use by initiator after the lock period expires (by default - 30 minutes). Before that - the amount, which is used to endorse or mistrust, will be unavailable to any actions and will be temporarily excluded from available amounts.

Endorse\mistrust action has value 0.1 QBIT. And you have only one endorsement and one mistrust action concerning the given buzzer. In other words, for example, you can only once make an endorsement of a given buzzer.

This model is based on a simple principle: *trust is easy to lose, but it is difficult to regain.*

## (5.2) User experience

“Adoption” is the most mentioned word in 2020 concerning blockchain. And to expand technology and drive it to the ordinal social media member we need to focus on usability and “recognizability”. So, it is very important that the UI and functionality should be familiar to the ordinal user. And thus entry level for the ordinal user should be very comfortable. That is why we decided to use industry standard, battle proven twitter-like style for our application. Also our decision is driven by the following statistics:

- overall twitter users is about 1.3B
- monthly active users is about 400M
- 84% of them use twitter for the various kinds of news
- more than 92% use twitter mobile application

And yes, we are targeting the established market with a new technology approach. It is easy to start with Buzzer: to become network participant, you should just install Buzzer application on your smartphone, get from the network initial QBITs (just during installation process) and start buzzing.

## (5.3) Realtime feeds

Buzzer personal and global feeds of new buzzes, replies, rebuzzes works in realtime manner. You'll receive updates from your community members just in time as it happens. Buzzes are ordered according to the *Trust Score* (5.1) model of each member in a 5 minute time-frame. But 5 minutes time-frames are ordered strictly chronologically. There is no room left to feed manipulation - your client application works with at least two nearest nodes at the same time and at the same time your application should receive the same updates from these nodes (we call this technique "soft commit"). Moreover, to be absolutely convenient that the content is legit, your Buzzer application conducts signature checks for all items that come from the nodes.



## (5.4) User's interface and common actions

Buzzer users' interface based on industry standard in social media applications - Twitter & Telegram. Millions of users worldwide are using mentioned applications every day. So, we decided to adopt best practices and add more unique options to build useful application. Simple and understandable UI allow you to make just-in-place actions:

- write a buzz (micro-blog) with optionally attached media and/or embedded external links
- make rebuzz with comments of instantly just from your current feed
- make reply on buzz in your feed (global feed or sub thread)
- like buzz or reply in your feed/global feed
- make tip or donation to buzzer of exact buzz
- make endorsement or mistrust of exact buzzer
- subscribe/unsubscribe from buzzer just from dropdown buzz menu

Every action you take is provided with your personal signature. This signature can be verified by the other network participants. And it is guaranteed that it is you and only you have made this changes.

## (5.5) Personal events and notifications

Events and notifications like personal & global feeds works in realtime mode. Every single event about action taken by member (whether you have subscription or you are the follower) gets into your events feed and immediately will be delivered to your device. As for the buzzes, events also have implemented a "soft commit" scheme. And every event will pass signature checks before it is displayed to you.

## (5.6) Secret chat with end-to-end encryption

Buzzer chat main feature is strong encryption of all content - text, media. Moreover, all correspondence between you and your contact is encrypted by *default*. Encryption uses AES algorithm with 256 bit secret key. This secret key

is not stored anywhere and not transferred between you and your counterpart - this key is calculated every time by both sides. That is why our encryption scheme has almost ultimate degree of safety. There is no option to guess the secret 256 bit key. If some one decided to do that he/she need to conduct a search through  $1,16 \times 10^{77}$  keys. This number is approximately equals to the number of atoms in the *Universe* =  $1 \times 10^{78}$ . That's practically impossible. So, just enjoy safe instant messaging with *Buzzer*.

## (5.7) Wallet management

Buzzer is tightly bound as to the blockchain technology and to cryptocurrency usage. Almost all actions you make within Buzzer consumes little amount of QBITs. And to manage QBITs and inspect actions log (sent QBITs, receive QBITs, various linked or "fee" transactions) we have to implement cryptocurrency wallet. Using wallet you can:

- view your current balance and all transaction log (including transaction details i.e.: hash, amount, fees, type, linked type, etc.)
- prepare invoice to receive QBITs (through special QR-code, which can be scanned by sender)
- send QBITs to the buzzer name or buzzer address with fee management

## (5.8) Decentralized user's data storage

Buzzer first of all is Decentralized Application or *DApp* built on blockchain technology. This DApp deployed on many nodes in the Internet. These nodes are owned and operated by the community members. Each node communicates with the others and synchronizes its own state - download all published data by users. Thus, once you publish buzz, this buzz will be replicated on many nodes in the network and this data chunk will never be removed from the network. Network itself guarantees that the published, replicated and stored data on multiple nodes will be available to the people constantly.

## (5.8) Decentralized media storage

Buzzer is the common name for groups of Decentralized Applications (*DApps*). *Buzzer* (itself) - microblogging platform and *Cubix* - decentralized media distribution and storage platform. Any media file you attached to the buzz or sent through secret chat (of course this media file will be encrypted before sending to the network) will be pushed and replicated to the many nodes, which supports this type of DApp - Cubix. Cubix also guaranteed that the published media will never be removed from the network and will be available to the users.

## (5.9) Decentralized exchange

To provide independent functioning of Buzzer network we are going to implement Decentralized Peer-to-Peer assets exchange. On the first stage we intend to support the Bitcoin/Litecoin protocol to enable instant atomic swaps for the Buzzer network members. On the second stage - extended trading capabilities. Decentralized exchange - *Cadex* - it will be as another DApp, that will be built on Qbit platform.

## (5.10) Pay-to-go content

*Micro-articles.* Micro-article consists from preview with annotation and main body with various media. Article size is up to 3500 symbols long. Each micro-article can be free for all or can be published with a price to get access to this article. Price can be set by the article author in QBITs just before publication action was conducted. When you decide to get full access to the given article, you pay (just tap on cash-out symbol under article preview) requested QBITs directly to the author. Payment action will be processed by the special smart-contract. As a result of this action, payment transaction will contains (that is obligatory rule, which will be checked on every node in the network): requested amount to the article author minus platform fee.

*Media content.* Creative illustrations, video-reportages & etc. All this media content will be available as preview to the public access and as pay-to-go approach to get full access to the creative art, video-reportages, stock photo. This request will be processed as for the micro-articles. And as a result special

payment transaction will be emitted with two outs - first to the author, second - platform fee.

## (5.11) Decentralized video-streaming

We plan to implement decentralized video streaming services. It will be an online streaming platform, which allow you to set up and broadcast verifiable streams. All streamed content will have the signature of the broadcaster and any receiver or member will be able to verify incoming frames. This streaming service will be backed by the it's own DApp infrastructure (shards, consensus, synchronization and broadcast scheme). Optionally broadcasted streams can be encrypted with 256 bit key.

## (6) Qbit platform (brief)

To achieve our goals and build a robust decentralized microblogging platform we need to implement a special type of basic blockchain platform. Keeping in mind that the microblogging platform should process tens of thousands transactions in second simultaneously, we need flexible and solid architecture, based on battle-proven approaches and unique scalability technique.

So, Qbit platform is a multi-asset privacy-oriented blockchain platform based on PoW/PoS/DPoS configurable consensus with UTXO (unlinked transaction outs) principles. Qbit main focuses are:

- Entity-based governance
- Various kinds of typed transactions
- Schnorr signatures/multi-signatures by default
- Support of different signature schemes
- Out-of-the-box privacy transactions for the value transfer (blinded transactions)
- Ability to define various asset types and make asset emissions (tokens)
- Scalable architecture
- Atomic swaps support
- Ultra-fast transaction processing

- Multichain support with sharding principles (including different parametrized consensus for each shard)
- Smart contract support
- Fast virtual machine (QVM) with asm-based machine codes (qASM)
- Cuckoo Cycle PoW consensus with 51% attack resistance
- Flexible integration infrastructure to support alts- and side- chains (gatekeepers)
- DApp creation support infrastructure (front-to-back)
- Built-in support of the "open digital organization" principles

There are two basic building blocks: transactions (various types) and blocks. Generic transaction consists of one or more inputs, one or more outputs, including fee. Every input and output contains hash of 'asset' type, thus single transaction can contain several assets to transfer with in&out balance consistence. Value transfer transactions can be private transactions with blinded amounts (Pedersen commitment, range proofs). Transactions is not free - you need some QBITs to pay for them.

Basic transaction types:

- *TxCoinBase* / "coinbase": coinbase transaction. This type used internally by mining or block making process. Used in the Main chain only.
- *TxBase* / "base": used for shards to collect transaction fees in the block. Mining or block emission process.
- *TxBlockBase* / "blockbase": special transaction type, that aggregates and send to the miner's address collected fees from shards block making procedure.
- *TxSpend* / "spend": spend or send Qbits or any other assets to the Qbit user (address or pkey).
- *TxSpendPrivate* / "spend\_private": spend or send private (blinded amounts) Qbits or other assets to the Qbit user (address or pkey). Transactions of this type have size 3x and more larger, than regular spend transactions. Amounts of private transaction are blinded and visible/claimable only by receiver.
- *TxFee* / "fee": special transaction type, that represents Qbit fee for DApp transactions, those resides in various shards.

- *TxAssetType* / "asset\_type": transaction, that creates token type with attributes (name, description, scale, total amount).
- *TxAssetEmission* / "asset\_emission": transaction linked with the asset type transaction and enabling actual full or partial emission. Emitted tokens sent to the creator's Qbit address.
- *TxDApp* / "dapp": transaction declares DApp instance as entity. Attributes are: name, description, sharding type, instance types.
- *TxShard* / "shard": tis type of transaction linked to dapp transaction and creates shard for the selected dapp.

Qbit platform has a rich binary-coded extensible network exchange protocol. Basic actions - state changed, block found, time changed, push transaction & etc - all of these actions are wrapped into network exchange messages. Protocol itself has bidirectional dialogue nature (except notifications - this type of messages is unidirectional). Protocol stack works in asynchronous extensible mode and capable of handling thousands requests/messages per second for the one processing thread.

*Little more details.* When a transaction is pushed, for example, border checks are conducted and transaction passed to the corresponding memory pool. Mempool pass checks (including qasm pre- post- conditions for transaction ins/outs) and adds this transaction to the mempool tree. When miner collects transactions from the pool, transaction selector for next block traverses candidates (priority, up/left/right linkage) and makes consistent set of transactions for the future block. **Note:** if there have place cross-sharding transactions links, so this dependent transaction is postponed until the parent transaction will be confirmed.

Miner (or validator\block source), using specified algo, finds a decision for the next block, checks the result and tries to broadcast block header to the network and consequently stores found block with all transactions in the chain (mempool is cleaned up from committed transactions).

## (7) Buzzer platform (brief)

*Buzzer* - is the Decentralized Application (*DApp*), that runs on Qbit blockchain.

Every *DApp* based on Qbit platform is built on:

- Specialized or shared shards
- Specialized transaction types (including validation & processing based on qasm & c++ code)
- Confirmation scheme (local consensus)
- Qbit protocol extensions (for nodes, full nodes and light nodes)

Buzzer has several shards (linked to main chain but mostly independent, specialized chain to enable scalability and performance), that contains user data. When *@buzzer* is created, the system will assign a shard (most underloaded one) to this new buzzer. And all produced user's data from this buzzer will be placed in this shard. Every single transaction (for example "buzz" or *TxBuzz*), that is going to be placed into bound shard should (according to the validation scheme) reference a special transaction - "fee" or *TxFee*. *TxFee* transaction that are free *in QBITs*, will be consumed by the miner as a reward for the found block. Every shard in Buzzer *DApp* has its own consensus based on PoW. Every miner, that found next block will collect all *TxFee* transactions (of course not linked yet) and make *TxBase* transaction with collected fees and consequently (just after block was found) create and broadcast *TxBlockBase* transaction (on main chain) to claim collected QBITs to its own address.

Buzzer contains following transaction types:

- *TxBuzzer* / "buzzer": create unique entity - buzzer with specified entity name (entity name should be unique). Every buzzer transaction has special outs which can be used by buzzer itself to make buzzes (no one else can make original posts from this buzzer except originator - signature check), to make endorsements/mistrusts by other members, to make subscriptions to this buzzer & etc.
- *TxBuzzerInfo* / "buzzer\_info": create new buzzer info transaction, which contains alias, header and avatar images. Original buzzer name stays intact always.
- *TxBuzzerSubscribe* / "buzzer\_subscribe": make subscription on given buzzer, this transaction guarantee you, that only active and explicit subscriptions which made by you will be the actual source of personal

feed contents. Note: this type of transaction concerning you buzzer can be made only by you with your key.

- *TxBuzzerUnsubscribe* / "buzzer\_unsubscribe": unsubscribe from buzzer. Make this transaction and you'll never get new data from given buzzer. Note: this type of transaction concerning you buzzer can be made only by you with your key.
- *TxBuzzerEndorse* / "buzzer\_endorse": this type of transaction add endorsement to the given buzzer. This type of transaction locks 0.1 Qbit (timelocked transaction) for 30 minutes: Txfee transaction emitted with self-spend out and target height.
- *TxBuzzerMistrust* / "buzzer\_mistrust": this type of transaction add mistrust value to the given buzzer. This type of transaction also locks 0.1 Qbit (timelocked transaction) for 30 minutes.
- *TxBuzz* / "buzz": make buzz - micro-blog record with attached media. Your buzzer's special out is used to compose this type of transaction. Only you can make buzz from your buzzer, because of key and signature checks, which will be conducted during broadcast transaction (and synchronization of course).
- *TxBuzzLike* / "buzz\_like": make like to the corresponding buzz/rebuzz/reply. You can make it only once for the given buzz/rebuzz/reply.
- *TxRebuzz* / "rebuzz": repost given buzz to your's buzzer feed with backlink to original buzz.
- *TxRebuzzReply* / "rebuzz\_reply": make repost of given buzz with comments.
- *TxBuzzReward* / "buzz\_reward": send to the source buzzer a small amount of QBITS (1k, 2k or 3k qBits).
- *TxBuzzerConversation* / "buzzer\_init\_conversation": initialize conversation with selected buzzer. This action can be made only once.
- *TxBuzzerAcceptConversation* / "buzzer\_accept\_conversation": if someone creates conversation with you, you'll get an option to accept this conversation (and vice versa). This transaction type accepts pending conversation.



- *TxBuzzerDeclineConversation* / "buzzer\_decline\_conversation": decline conversation transaction. If you make this action you'll never see any messages and requests from your counterpart.
- *TxBuzzerMessage* / "buzzer\_message": send encrypted message to the conversation counterpart. Message body and message media will be encrypted using 256 secret key.
- *TxBuzzerMessageReply* / "buzzer\_message\_reply": make reply to the selected message. Reply will be also encrypted as well. Note: this transaction type is not fully supported now.

As long as Buzzer works in conjunction with *Cubix* DApp, last has its own data store - own shards, own consensus and own miners and validators. Mining rewarding scheme is equal to the scheme implemented in Buzzer DApp.

*Cubix* allows to store various media types (jpeg, png for now and list of supported media will be enlarged soon, see roadmap), including encryption support of media content data. Media files splitted on linked chunks (similar to file system organization). Each chunk of data represented by special transaction type *TxCubixMediaData* or "media\_data". Every media before broadcasting to the network passes "making preview" procedure and this smaller sample is written to the media header *TxCubixMediaHeader* / "media\_header".

Cubix has transaction types:

- *TxCubixMediaHeader* / "media\_header": media header transaction. Contains preview data (can be encrypted) of original media file or if media file is small enough - all media file contents. This transaction is the header of media data linked list of *TxCubixMediaData*.
- *TxCubixMediaData* / "media\_data": represents media data chunk (can be encrypted). Can be linked to the header, next data chunk or media summary.
- *TxCubixMediaSummary* / "media\_summary": final transaction of uploaded media. This transaction is the tail of the media data list.

Protocol extensions, which allows to securely select data (indexed) from nodes and full nodes are (this selects operates on transactions and transaction signed details):

- Select lists of buzzes for personal feed, global feed, buzzer feed
- Select threaded replies for the given buzz
- Select lists of followers
- Select lists of endorsers\mistrusters
- Select lists of personal events
- Select lists of conversations and lists of messages
- Process realtime updates for various feeds

*Note:* all of the selected feeds pass through "soft commit" technique - lists which come from at least two nodes pass mutual cross-checks. Second level checks - signature verification of selected items. And only those items, which successfully passed all of the mentioned checks will be displayed to the user.

## (8) QBIT and QTT economics

Buzzer and Cubix are the media rich DApps. These DApps (infrastructure) should be able to process and store huge amounts of user data. Thus infrastructure items - nodes - should be able to provide high processing speed and storage capacity. That is why we decided to use a basic mining approach CPU-bound and memory hungry algo.

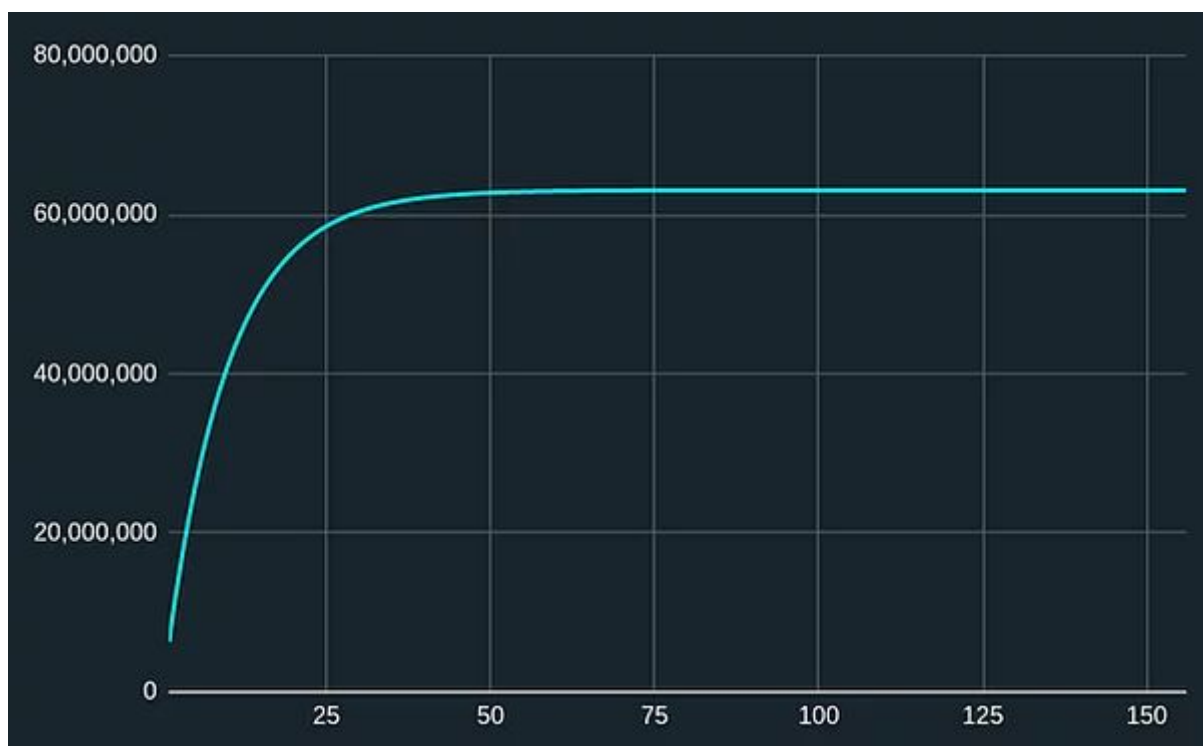
### (8.1) QBIT - Platform cryptocurrency

QBIT cryptocurrency parameters:

- *Algo/Consensus:* PoW Cuckoo Cycle (CPU-oriented) for Main chain and for bound DApps - Buzzer & Cubix (transaction fees in Qbits from those DApps are collected by particular miners as block rewards)
- *Unit:* 1 QBIT = 100 000 000 qBIT or (1 0000 0000 qBIT) - Main chain
- *Block time:* ~5 secs
- *Block reward:* logarithmic progression - each next year reducing current reward on 10%. *Specifically:*

- 1 year - 1.000 QBIT
- 2 year - 0.900 QBIT
- 3 year - 0.810 QBIT
- 4 year - 0.729 QBIT
- ... (almost a half of the supply will be minted during first ~7 years, see chart below)
- *Total supply*: ~63,071,929 QBIT
- *Premine*: absent

*Emission schedule chart (amount / year):*



*Mining equipment requirements:*

- Node
  - Minimum (Qbit mining)
    - 2 cores, 2 Gb RAM, 150 Gb SDD, 10 Mbit Internet access
  - Optimum (Qbit mining, Buzzer miner/validator)
    - 6 cores, 8 Gb RAM, 350 Gb SDD, 20 Mbit Internet access
- Full node
  - Minimum (Qbit mining, Buzzer & Cubix miner/validator, up to 500 light node or clients connectivity)

- 8 cores, 16 Gb RAM, 350 Gb SDD, 50 Mbit Internet access
- Optimum (Qbit mining, Buzzer & Cubix miner/validator, up to 1500 light node or clients connectivity)
  - 16 cores, 32 Gb RAM, 500 Tb SDD, 100 Mbit Internet access
- Maximum (Qbit mining, Buzzer & Cubix miner/validator, up to 3500 light node or clients connectivity)
  - 32+ cores, 64+ Gb RAM, 1 Tb+ SDD, 150+ Mbit Internet access

So, *QBIT* cryptocurrency is the fuel for the Buzzer and Cubix DApps. You need some QBITs to live on Qbit platform.

## (8.2) QTT - Qbit Technology Token

QTT (Qbit Technology Token) is a Digital Divisible Token, which represents the single "voice" of "Qbit Technology" Distributed Digital Organization. This token allows to its holder:

- To receive guaranteed continuous income from commercial transactions that are carried out within the Qbit Platform and related decentralized applications (currently - Buzzer and Cubix).
  - **Note:** commercial transactions are transactions that result from the provision of services to users of applications on the Qbit Platform or the sale of digital assets or goods (various media) on the Platform.
- Take a part in voting procedures considering Qbit Platform initiatives, future development and growth.

Platform fee then will be distributed by those miner, which will find the next block. Distribution principles are: 50% from fee amount distributed by QTT holders proportionally, 50% miner will keep to itself as a part of block reward.

QTT asset type is created on the Qbit blockchain and QTT emission is conducted. Token specification:

- *Name:* QTT

- *Description:* Qbit Technology Token
- *Scale:* 4, 1 QTT = 1,0000 / minimal unit = 0,0001 qTT
- *Current supply:* 10,000 QTT
- *Total supply:* 10,000 QTT

*QTT* tokens is the investment and governance token. Holding this token you'll be guaranteed that you'll be able to receive a part of fee from pay-to-go content, decentralized exchange fees & etc.