Becaz: Time, as payment and investment asset

www.becaz.org

Abstract. Becaz is a cryptocurrency which is related to time with blockchain infrastructure. Becaz uses the *time* as payment and investment asset, for this objective, we developed a proof of time concept: converting time to money. Using this concept with Becaz, people can earn a fair amount of money based on their accomplishments and skills over a certain period of time. We believe that Becaz is about to reduce the unequal distribution of income among the people who do the same job. Moreover, it tackles to decrease brain drain, poverty, and ignorance. Thus, we created a peer-to-peer online learning platform which is called becaz.com. With this platform, becaz coins can be mined by knowledge and distributed to all skilled people.

Introduction

There are more than 7,7 billion people living all around the world[1], some of whom live in wealth and prosperity, while others live in misery and ignorance mostly as a result of geographical borders of their location. In other words, it is a direct consequence of the fact of being in a poor country or in a rich country[2].

Rich countries have sound institutions and poor countries have shaky institutions. Indeed, there is a direct association between poverty and corruption. The richest countries are least corrupted ones, while the most corrupted countries are the poorest. When there is a corruption, the countries can't collect enough taxes to establish good institutions they need to escape the poverty trap. Which is why the poor countries are unable to invest in education, health, transportation and relevant services of the country that need to be developed. Consequently, intelligent and talented populations cannot be reached out in poor countries.

In this respect, talented, intelligent and skillful people in poor countries cannot do the job they love, because their jobs are not given the true value in their countries and they are unable to turn their skills into money. They feel constrained and alienated in their home country, in order to afford their personal and family expenses, to build a bright future and find a rewarding job, they are forced to move to a more developed country. This is a clear example of brain drain that is linked to inequalities and disparities defined in rich and poor countries. The inequality and disparity are still ongoing, the rich countries get richer, whereas poor ones get poorer[4]. This may lead to a catastrophic future for humanity[5].

Time as a real asset

Despite all the inequalities and disparities, there is something equal and accessible for every person which is the **time**. Obviously, each person has a limited time. The wasted or lost time can't be regained. Thus, time is a real asset in real life. Moreover, assessment of time varies from person to person. Some of them live a life to the fullest, while others' lives are not abound with variety of possible moments. The skilled people - teachers, lawyers, celebrities, doctors, engineers spend vast amount of their time, their money and assets to gain their job or life experience. So, their time is more valuable compared to others. The value of time will be made real through Becaz by using the proof of time concept.

Becaz

Becaz is a cryptocurrency depending on time with blockchain infrastructure. As it is indicated, many people all around the world are unbanked. Globally, about 1.7 billion adults remain unbanked, which means they are either without an account at a financial institution or use mobile money provider[6]. The one who gets involved in becaz ecosystem does not need a bank account and does not need a geographical border. Becaz provides safe and secure transactions of cryptos from peer to peer. Unlike the other cryptos, becaz uses the proof of time concept which provides a fair distribution of money among the beneficiaries. In other words, not only those who have money will be able to obtain Becaz coins, but also who have knowledge and skills can acquire them. Proof of time concept gives a value based on the quality of the skills that people will prove within the given time.
The equation will be as following:

$$T_p = \frac{S_q}{S_r} \times T_g \times A_c$$

T_p: Proved time, S_q: Quality of skill, S_r: Required quality of skill, T_g: Given time, A_c: Adjusting coefficient

The talented/skilled people can do the job they love in their own country without traveling to another place, basically by sharing their ideas through Becaz learning platform and get money by proving their time without holding any bank account, simply through blockchain infrastructure.
For this very reason, Becaz creates a peer-to-peer online education platform(see below or go to becaz.com). Becaz is about to prove how proof of time concept works and distributes most of Becaz coins by using this concept among people, based on their knowledge and skills. Becaz coins can be mined here by knowledge. Thus Becaz is not an Initial Coin Offering(ICO).

After having mined on the platform, Becaz coins can be sold and bought on crypto exchange platforms, can be exchanged with other currencies, goods can be purchased, can be paid to employees as a salary and can be a way of investment.

Becaz as a Peer-to-Peer Online Education Platform (Becaz.Com)

Education is essential for economic growth, poverty reduction, gender equality, public health, conflict resolution, and the transformation to sustainable production and consumption. Ensuring fairness in education can further accelerate the achievement of these and other Sustainable Development Goals (SDGs)[7]. So we get started to provide solutions with an educational platform.

Whereas everything has been developing by the time - technology, science, industry and, etc., the education system is almost the same as it was 150 years ago which is evolved in the industrial age, and it has become outdated and ineffective[8].

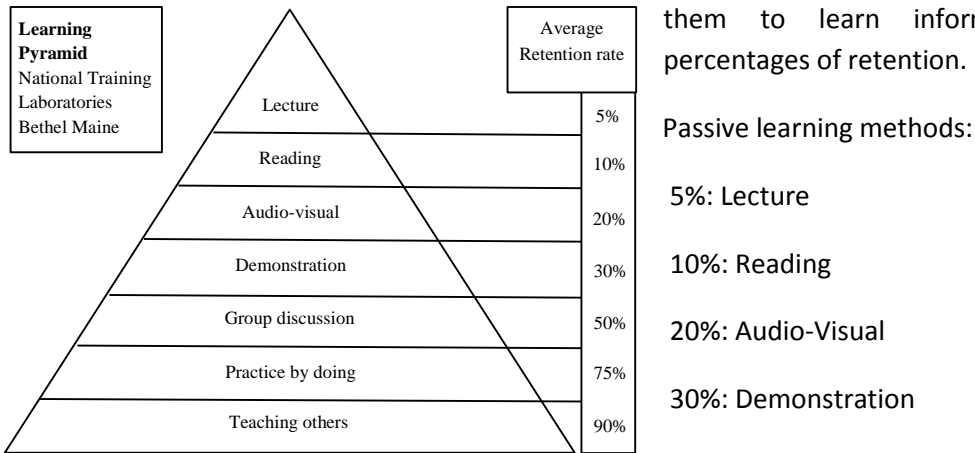We categorized the education system into 3 generations.

- The first generation education system: is a traditional education system, which is a teacher-centered schooling system. Teachers teach and students learn.
- The second generation education system: is made of e-learning methods which allow students to choose their subjects and teachers worldwide.
- The third generation education system: is a peer-to-peer online education platform using PoT (Proof of Time) concept. Becaz learning uses a hybrid combination of micro and macro learning models that students can focus on and learn only the necessary part of the subject they need. Learners will have the opportunity to get more information in less time, a maximum of 15 minutes of single video course. It is less costly and less time-wasting process. The PoT (Proof of Time) concept allows people to monetize their time through blockchain infrastructure. Thus, skilled people can convert their time to money.

Vision

We firmly focus on building a democratic, user-friendly, more adaptive, simple, gamified and interactive peer-to-peer online education platform that will fill the gap between YouTube and MOOCs.

Our product will stimulate well-talented(skilled) people and motivate them to make their product. Accordingly, the educators and the skilled people in any field do not need a bank account and do not have to migrate or become a refugee in other countries to earn, and keep their money. Besides, on Becaz learning platform 100% of paid money can be transferred to the tutor via blockchain infrastructure. Moreover, they can demonstrate their skills and meet their audience. In addition, they can develop themselves in different fields according to their time limit by sharing their courses, experiences and monetizing their proved time. Becaz learning platform builds bridges between content creators allowing them to take courses from each other by using their time as a payment tool.

According to the learning pyramid, there are various methods learners can be engaged in, which will allow them to learn information at various percentages of retention.

Learning Pyramid National Training Laboratories Bethel Maine		Average Retention rate
	Lecture	5%
	Reading	10%
	Audio-visual	20%
	Demonstration	30%
	Group discussion	50%
	Practice by doing	75%
	Teaching others	90%

Passive learning methods:

5%: Lecture

10%: Reading

20%: Audio-Visual

30%: Demonstration

Participatory teaching methods are more effective for learners as the following percentages:

50%: Group discussion

75%: Practice by doing

90%: Teaching others [9]

This pyramid shows us that the most effective way of learning is teaching others. By learning you will teach, and by teaching you will learn. In accordance with these informations, Becaz learning platform makes anyone - a teacher, anywhere - a school, and any proved time - money.

Proof of time (PoT)

Teachers and skilled people can monetize their time with Becaz by blockchain infrastructure.

Let's see how it works in this case:

Alice shares her programming course for 15 minutes, and Bob shares his science course for 15 minutes on our platform. In the beginning, Alice's time balance is 15 minutes and Becaz balance (proved time balance) is $0_{(min)}$, and Bob has the same balance as Alice has. Bob wants to learn programming and paired with Alice. The system will permit learning the entire 15 minutes of programming because they have the same charges. Bob's 15 minutes period is counted down. At the end of the course, Bob's all 15 minutes are transferred to Alice. As a result, Bob has 0 minutes in his time balance, Alice has 30 minutes in her time balance to spend on platform for watching the other courses. If Bob votes for Alice's course of 15 minutes, he can rate maximum with 10 stars. And if Bob gives 6 stars to Alice, then Alice's 15 minutes are converted to 9 proved time (9 becazes) according to the following equation:

$$T_p = \frac{V_g}{V_b} \times T_d \times A_c$$

T_p: proved time

V_g: vote given (6 stars)

V_b: base (10 stars)

T_d: duration of the video

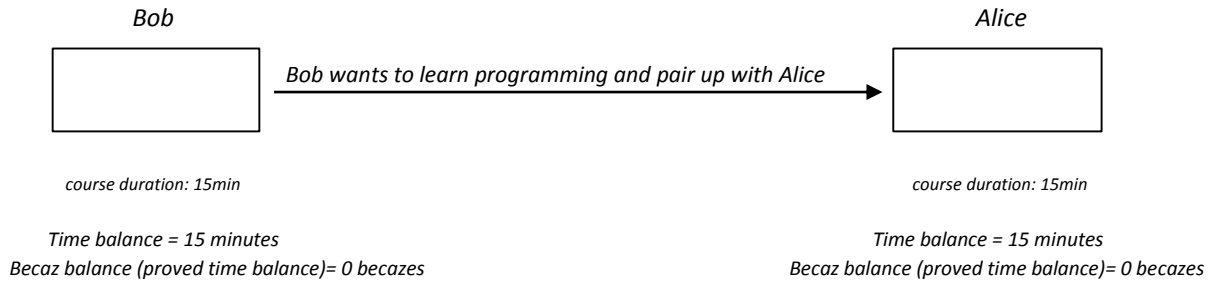A_c: adjusting coefficient (neglected at the beginning)

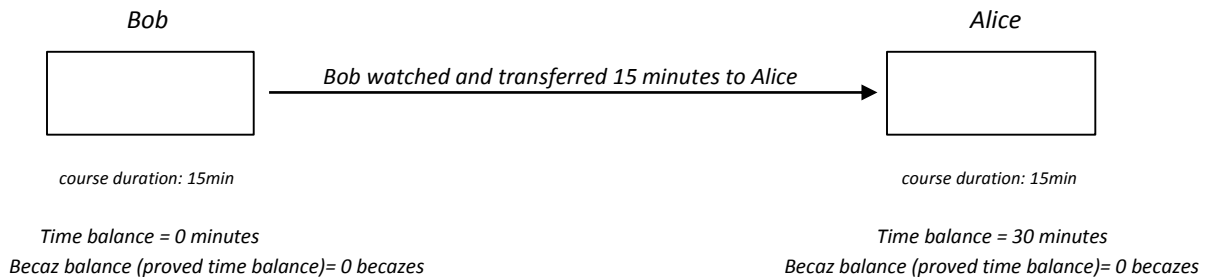So, $T_p = \frac{6}{10} \times 15$

$T_p = 9 \ min$

Finally, Alice's time balance is 15 minutes and becaz balance (proved time balance) is 9 becazes, by this way, Bob's time balance is 0 minutes and becaz balance is 0.1 becaz (voting fee). Transferred 15 minutes will be used by Alice to learn the other courses as well. On the other hand, Bob needs to wait for others to watch his place for gaining minutes.
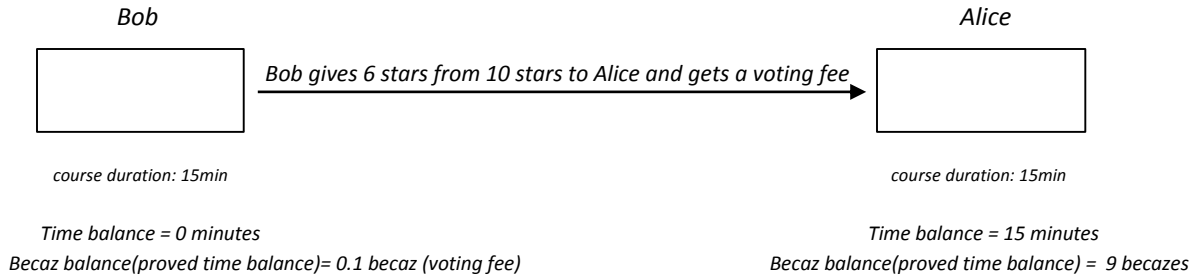
Demonstration of PoT

a) Bob wants to take course from Alice.

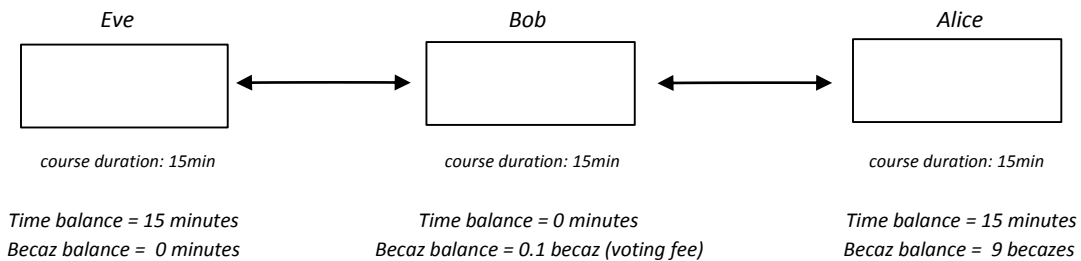Bob   Alice

Bob wants to learn programming and pair up with Alice →

course duration: 15min   *course duration: 15min*

Time balance = 15 minutes   *Time balance = 15 minutes*
Becaz balance (proved time balance)= 0 becazes   *Becaz balance (proved time balance)= 0 becazes*

b) If Bob does not vote for Alice's course, 15 minutes will be added to Alice's time balance.

Bob   Alice

Bob watched and transferred 15 minutes to Alice →

course duration: 15min   *course duration: 15min*

Time balance = 0 minutes   *Time balance = 30 minutes*
Becaz balance (proved time balance)= 0 becazes   *Becaz balance (proved time balance)= 0 becazes*

c) If Bob decides to vote for Alice's course, then Bob votes a course and gets a voting fee.

Bob   Alice

Bob gives 6 stars from 10 stars to Alice and gets a voting fee →

course duration: 15min   *course duration: 15min*

Time balance = 0 minutes   *Time balance = 15 minutes*
Becaz balance(proved time balance)= 0.1 becaz (voting fee)   *Becaz balance(proved time balance) = 9 becazes*

d) Bob needs to wait for others to watch his course to gain minutes.

Eve   Bob   Alice

← →   ← →

course duration: 15min   *course duration: 15min*   *course duration: 15min*

Time balance = 15 minutes   *Time balance = 0 minutes*   *Time balance = 15 minutes*
Becaz balance = 0 minutes   *Becaz balance = 0.1 becaz (voting fee)*   *Becaz balance = 9 becazes*

Note: *Every content creator can watch others' courses according to their time charge.*

Summary of PoT

1. Each teacher and each student can teach and learn on the platform by PoT concept.
2. Each single video course duration will be a maximum of 15 minutes (single video course=<15 min).
3. After the payment, if B did not vote A, then the time is transferred from B (15 min) to A (15 min), so the time balance of B will be 0 minutes and time balance of A will be 30 minutes.
4. If B votes A according to practicality, productivity and interactivity (gives 6 stars from 10 stars). The time balance of A will be (15min) and proved time balance (number of becazes) will be converted to 9.
5. The converted time is the proved time and the real value of the course (time) is obtained.
6. In the beginning, the proved time is equal to becaz (9 min = 9 bcz).
7. B gains voting fee in becaz coins or in minutes for voting A's course.
8. At the end, B has 0 minutes so, B needs to wait for C (15 min) to obtain minutes or becaz coins.

Note: After becaz coins have been distributed via the Becaz learning platform, the sustainability of the incentives (such as voting fees and learning incentives) will be provided by time incentives instead of becaz coins.

The value of time among the content creators

The value of time is not the same among content creators. That is why we form 4 levels according to the quality of time.

Free:
No Charge and it is completely free for everyone
This level will be filled by other 3 levels' donation.

Silver:
Includes Skilled tutors, Talented students, Game makers, Extraordinary people and learners.
In this level, everyone can share his/her skills and courses. Learners can buy courses with cryptos (becaz, bitcoin). If content creators can reach enough amount of becaz coins or time, they can move to the gold level.

Gold:
At this level, Celebrities, Teachers and Skilled people can share their skills and courses. Learners can buy courses with cryptos (becaz, bitcoin). 1 minute of Gold level equals 3 minutes of Silver level(1 G= 3 S). If content creators can reach enough amount of becaz coins or time, they can enter the diamond level. In addition, learners can communicate with the tutors by live video, audio and chat.
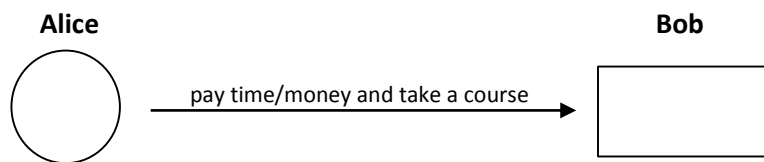
Diamond:
Includes Professionals, Experts, Academic Scientists, Celebrities.
Learners can buy courses with becaz or bitcoin. 1 minute of Diamond level equals 3 minutes of Gold level and 9 minutes of Silver level. Learners can communicate with the tutors by live video, audio and chat.
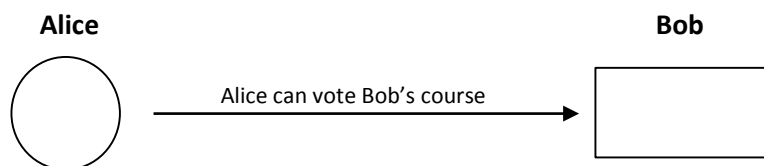
Proof of learning (PoL)

If a student buys the course by paying in becaz coins, almost 100% of paid money will be transferred to the owner of the course. The person who purchased the course can vote after completing the course. The system then asks the student if he/she wants to solve self-testing questions about the course he/she has learned. If he/she doesn't want to, the process is completed, but if he/she wants to, the self-testing questions will be displayed. For example: Alice followed Bob's course about science and read the relevant course materials. Afterwards 10 questions are assigned for Alice to answer. Alice must pass the 80% threshold for a reward. If she proves her knowledge and answers correctly 8 out of the 10 questions, she succeeds in answering at least 80% of the questions. As a result, Alice will be rewarded with becaz coins on Becaz learning platform. That is to say, Alice wins while she learns. **This process is called Proof of Learning (PoL).**
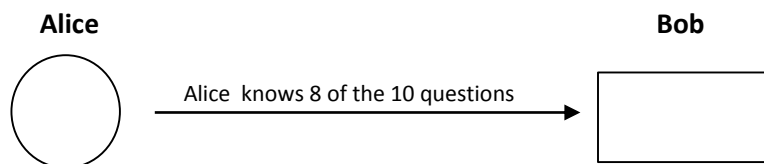
Demonstration of PoL

a) **Alice wants to take course from Bob.**

Alice   **Bob**

pay time/money and take a course

b) **Optionally, Alice can vote for a teacher's course and she gets the voting fee.**

Alice   **Bob**

Alice can vote Bob's course

c) **Optionally, If Alice wants to solve self-testing questions, then Alice must pass the 80% threshold for the reward.**

Alice   **Bob**

Alice knows 8 of the 10 questions

Finally, if Alice succeeds in answering at least 80% of the questions, then Alice will be rewarded with becaz coins or minutes by the Becaz learning platform.

Other features of becaz platform

Profinder

The majority of academicians and teachers are not familiar with media and editing, so they do not know how to create interactive courses. They have experience and knowledge, so they need a person to help them to create their interactive courses. We want to bring together academic teachers and their audience on becaz learning platform.

Profinder will be one of the features of becaz learning platform, works like the UBER. If a teacher wants to make interactive courses for becaz learning platform, then the teacher will press the profinder button. The Profinder will search video creators and match with the teacher's need. The teacher then meets with the video creator and will go to the nearest studio to make his/her course.

Donation

Becaz aims at solving inequalities in education by donation. Users can donate their becaz coins and their time to other people.

Social blog

Students and teachers can share posts on the social blog of becaz platform.

The Advantages of Becaz Learning Platform

Peer-to-Peer
Eliminates the middleman and provides a peer to peer learning, which means 100% of the money the student pays for the course is paid to the content creator (teacher).

Less is More
Short and focused courses are designed to meet a specific learning outcome. It is learner-centric. It can be easily accessed, quickly completed, and practically applied by the learners.

Prevents Junk Data
Students can buy only the necessary part of the subject they need which is both less costly and less time-wasting process.

Time as Money
Becaz platform builds bridges between content creators and allows them to buy courses from each other by using their time as a payment tool.

Earning by Learning
After the student purchases the course, he/she takes the exam of the course, and he/she earns money by learning in case of succeeding.

No Banks Required
No banks or bank accounts are required to sell or buy the course. Anyone with an internet access can benefit from the Becaz learning platform.

Democratic
The initiative to determine the price of the course is not under the control of the individual and the system, the price of the course is determined by the students (audience) who buy it.

Borderless
Becaz coin is not a currency of a country or the currency of a region. It is entirely borderless.
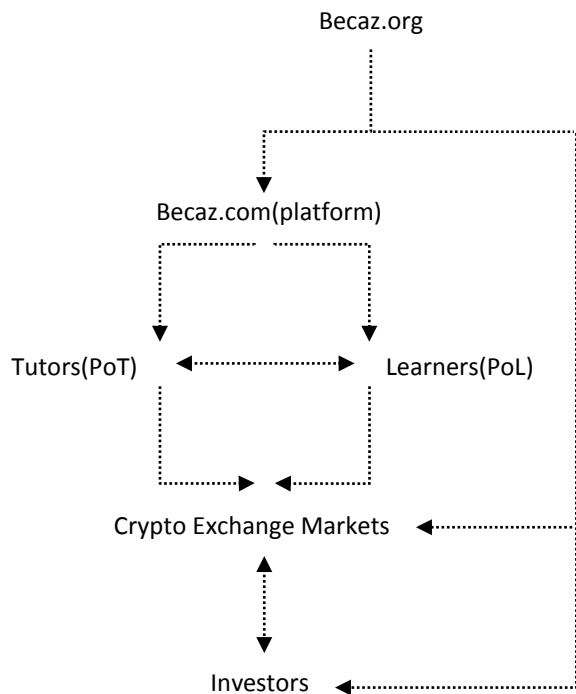
How to get becaz?

Primarily, being an ERC20 token created by ethereum smart contracts, becaz will move to its own blockchain base subsequently. The total supply of becaz coins will be equal to 821 million. What makes becaz unique is that it gives to its community members an opportunity to earn money with their knowledge on Becaz learning platform.

Additionally, there are several ways of investing in becaz coin: to get becaz coin from the cryptocurrency exchange markets and via becaz.org. 451 million becaz coins will be in circulation for public. The purpose of becaz is absolutely **not planning to be an ICO**.

So, people can get becaz coins in three ways:

1. By making their video course and proving their time (Proof of Time)
2. By buying courses and proving their learning (Proof of Learning)
3. By investing

Becaz coins distribution mechanism

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                        Becaz.org
                           ┊
                           ↓
                  Becaz.com(platform)
                   ┊             ┊
                   ↓             ↓
      Tutors(PoT)  ←┈┈┈┈┈┈→  Learners(PoL)
                   ↓             ↓
              Crypto Exchange Markets  ←┈┈┈
                   ↕                      ┊
                Investors  ←┈┈┈┈┈┈┈┈┈┈┈┈┈
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Conclusion

Problems such as global inequality, unfair distribution of income, poverty, ignorance, brain drain caused by the misconduct of governments should not be people's fate. Becaz has developed a concept to strive for overcoming these problems by using our time, which is our primary value that is available to everyone. It does not only contribute to the poor countries' economic and social development, but also benefits rich countries by decreasing refugee burdens. The Proof of Time concept provides a value based on the quality of the skills that people will prove at a given time. To really convert this value into an asset, people need a payment tool – a currency. In this regard, becaz.org produced the cryptocurrency, which is the real counterpart of the time and effort that people spend. Also, they needed a platform where people could prove their knowledge and skill. Becaz is about to spread its ecosystem into movie sector, freelancing and social media platforms. In the first phase, using the proof of time concept, becaz builds a peer-to-peer online education platform for mining becaz coins and the fair distribution of coins according to people's knowledge and skills. The becaz team continues working on the project and will have updates in the future. Becaz learning platform will be a hope and venue for people with talent and knowledge, and will allow them to earn money by staying in their own countries by doing the jobs they love.

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