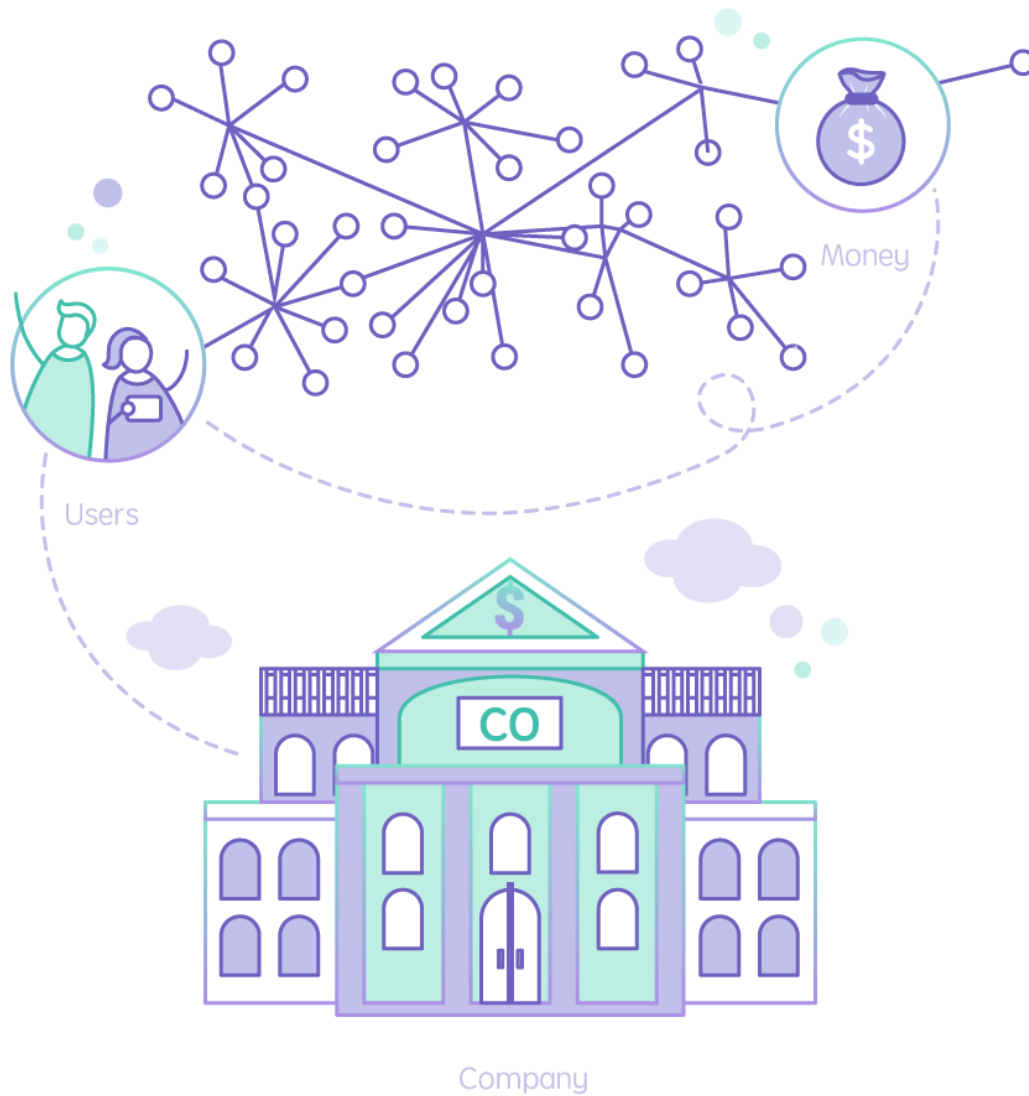




---

PROCHAIN



## ProChain - The Nextgen Decentralized Blockchain for Promotion

Team Promo  
2017/8/11

---

---

# INDEX

<b>1. Introduction .....</b>	
• The Original .....	3
• Product/Market Fit .....	4
<b>2. ProChain .....</b>	
• Mission .....	5
• Why Blockchain .....	6
• Solution .....	6
• Accounts .....	7
• Decentralized Quest Flow .....	8
• Quest Matching Mechanism .....	9
• Machine Learning Model (GBDT) .....	10
• POSst Mechanism .....	10
• Refund Confirmation Mechanism .....	11
• User Growth .....	12
• System Design .....	12
• User Client and SDK .....	12
<b>3. Scenario for Usage .....</b>	
• Mobile App Installation .....	13
• Token Distribution .....	14
<b>4. ProChain Dev Team and ICO related .....</b>	
• Purpose for crowdfunding .....	14
• ICO Schedule .....	14
• Budget Allocation .....	15
• Team Members .....	15

---

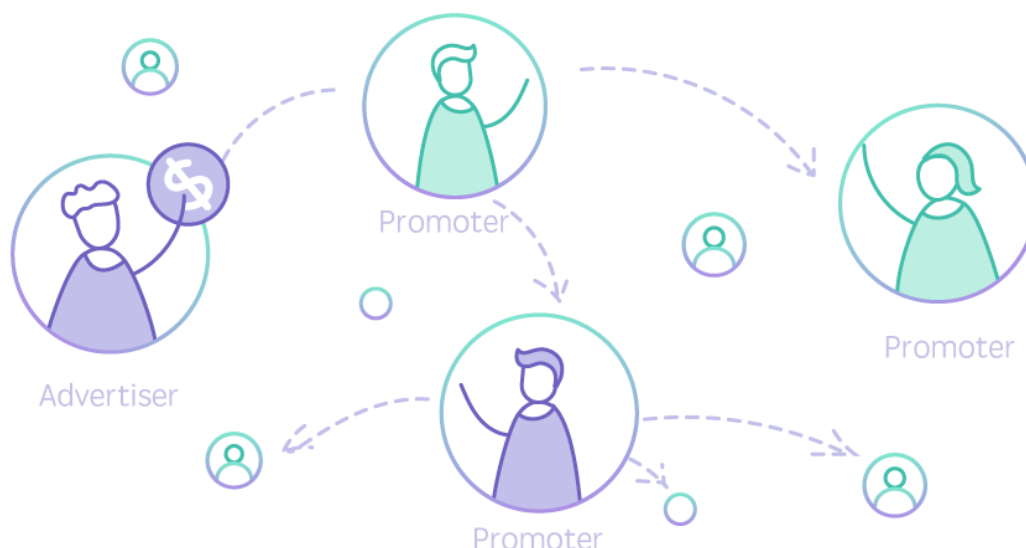
# INTRODUCTION

## The Original

From the point of view by enterprise, how to distribute marketing budget and optimize the channel so that it can accurately and quickly convey to the target customers has always been a strong demand. In the history of the Internet, the search engine like Google has successfully verified the feasibility of the PPC business model. But as time goes by, search engine marketing has gradually become a minority groups' game, especially the platform and the bidding alliance. The threshold for small or medium enterprises to enter is too high. So is there a mechanism to optimize the enterprises' marketing resources, so that the effectiveness can be tracked, quantified, and regardless of the size of the enterprise can benefit from it?

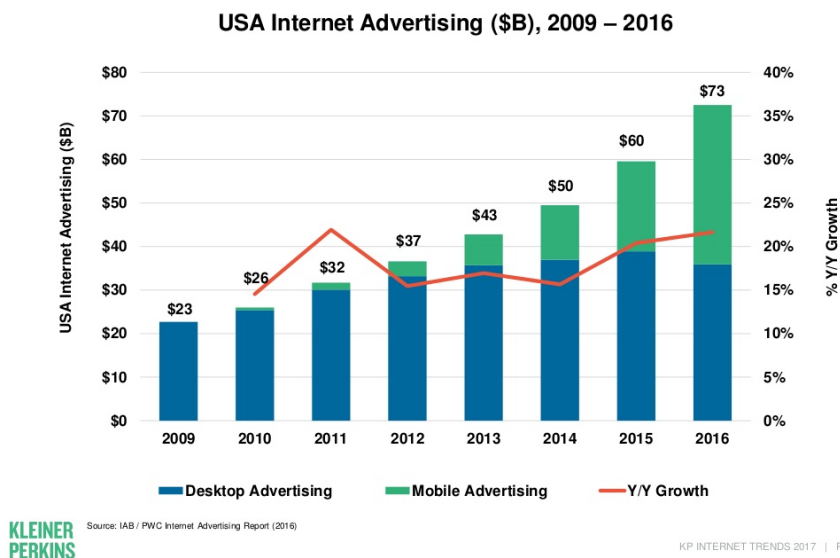
In the global trillions of the advertising market, the marketing budget is partially earned by the search engine, advertising and other technical intermediaries. User privacy and their data are continuing leaking. Advertising fraud clicking occurred frequently. According to the recent data, a single App installation costs as high as 2 to 3 USD, and some special types of users, the cost is even up to hundreds of dollars. So whether there is a mechanism to eliminate the intermediary costs of the platform, with technical means to reduce advertising fraud, reduce marketing costs, meanwhile reducing user privacy disclosure?

On the other hand, in the process of building social relations, people tend to pay a lot of money and energy. In fact, the vast majority of online social relationships such as Facebook, Twitter is inefficient or even ineffective. So whether there is a method, in cooperation with friends on win-win situation, meanwhile monetize their social relationships?



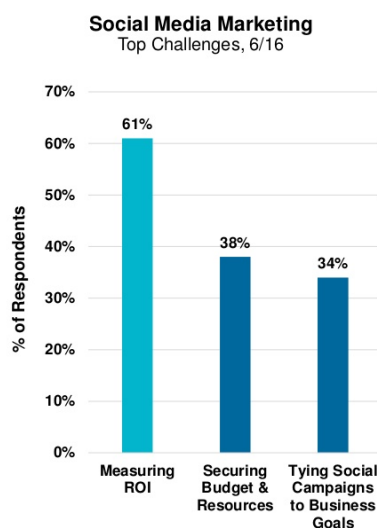
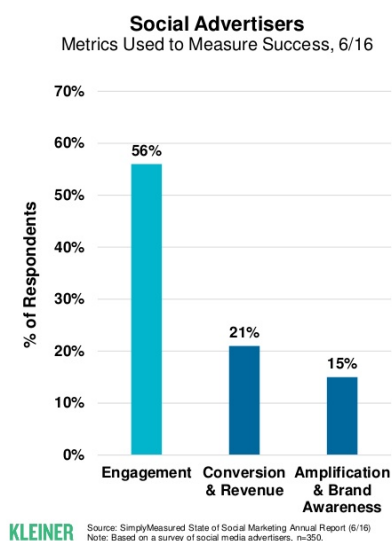
## The Product / Market Fit

Online Advertising = Growth Accelerating, +22% vs. +20% Y/Y...  
Mobile \$ > Desktop (2016) on Higher Growth, USA



According to Mary Meeker 2017 Internet Trends report, the US Internet advertising market has reached 73 billion USD in 2016, Chinese Internet advertising market capacity reached 43 billion USD, the global Internet advertisement market is more than 150 billion USD. According to the financial releases, Google's global AD revenue reached \$79.4 billion in 2016 and Facebook's global AD revenue reached 26.9 billion dollars, both a total of 100 billion USD. Google's online AD business gross margin is surely no less than 25%, which means the enterprises' marketing budgets for the intermediaries are far more than 35 billion USD.

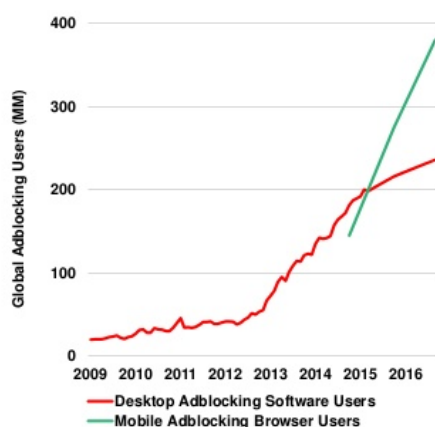
Advertisers = Like Measurable *Engagement* Metrics But...  
Some Find Measuring *ROI* Challenging (as with Offline)



From the viewpoint of advertisers, the ROI measurement of online advertising is the most concerned (61%) issue, followed by the security of the budget (anti-fraud), and finally the marketing campaign itself.

## Ad Blocking = Growth Continues...Especially in Developing Markets... Users Increasingly Opt Out of Stuff They Don't Want

**Adblocking Users on Web  
(Mobile + Desktop), Global, 4/09 – 12/16**



**KLEINER  
PERKINS**

Source: PageFair 2015, 2017 reports. These two data sets have not been de-duplicated. The number of desktop adblockers after 11/16 are estimates based on the observed trend in desktop adblocking and provided by PageFair. Note that mobile adblocking refers to web / browser based adblocking and not in-app adblocking. Desktop adblocking represents active users of desktop adblocking software between 4/09 – 12/16, as calculated in the PageFair 2015 and 2017 reports. Mobile adblocking refers to active users of mobile browsers that block ads by default between 12/14 – 12/16, including the number of Digital subscribers in the Caribbean (added 10/15), as calculated in the PageFair & Pricer Data 2016 and PageFair 2017 Adblocking Report.

**Adblocking Penetration  
(Mobile + Desktop), Selected  
Countries, 12/16**

Country	Desktop	Mobile
China	1%	13%
India	1%	28%
USA	18%	1%
Brazil	6%	1%
Japan	3%	--
Russia	6%	3%
Germany	28%	1%
Indonesia	8%	58%
UK	16%	1%
France	11%	1%
Canada	24%	--

HP INTERNET TRENDS 2017 | PAGE 18

Internet users who has installed Adblock to block ADs grows rapidly, the traditional Internet advertising's effectiveness is weakening. As the core value of Internet industry, the value which created by users' attention should be refunded to the user themselves rather than platform's profit.

## Mission

Based on the EOS blockchain, we'll establish a decentralized marketing campaign distribution blockchain "ProChain". To release marketing quests by smart contract, real-time reward the promoters who have finished the quests. The token of ProChain is named "PRO", which meets the standard of ERC-20 token and can be traded through the Ethereum Blockchain. The share of no less than 60% of the PRO will be issued through the ICO, and the total amount of the token is limited to 10 billion. Advertisers can participating in the ICO to acquire tokens or buy tokens from cryptocurrency exchanges for marketing. The Promoters who complete the quests will earn ProCoins as a reward based on the quests' unit price and their influence. Meanwhile, the promoters are basically the customers themselves of the advertisers.

---

## Why Blockchain

- ① Real-time settlement through smart contracts deployed on the EOS blockchain to avoid delays or fall into contractual disputes
- ② Eliminate no less than 25% of the intermediary costs by blockchain's natural features, saving business owners' budget, increase the promoters' revenue
- ③ Establish an account rating mechanism based on blockchain data analysis and machine learning. Advertisers can determine the delivery range by ProChain's data analysis platform, and identify the target users' characteristics
- ④ Through the unique POST mechanism, eliminate the fraud risk in advertising totally

## Solution

For Advertisers:

- Create an account
- Charge ProCoins to the account
- Create Quest's Smart Contract
  - Set up the start time & ending time
  - load ProCoins into the contract
  - Set up the unit price of the quest
  - Set up the bidding prize for ranking
  - Set up the threshold of promoters
  - Set up quest tags
  - Design promotional materials
  - Set up the core indicators of the quest such as views, clicks, app downloads, token distribution
- Release the contract
- Quest rankings by bidding prize
- Quest effectiveness assessment when it's finished
- Promoters' automatic rating

For Promoters:

- Create an account
- Charge a small security deposit to the account for Anti-Spam
- Enter ProChain DApp to claim quests which meet the requirements
- Complete the quest
- Promoting quests in his/her social network for bidding prize

- 
- According to the power of spreading to gain the corresponding share of bidding prize

$$YourPrize = \frac{\log(PPL_n)}{\sum_{n \in N} \log(PPL_n)} \times BiddingPrize$$

- The bonus share is positively correlated with the logarithm of the users who are following you meanwhile completed the quest
- The bidding prize is an important part of the contract, when the quest completed, the promoters can call the smart contract to claim their prize

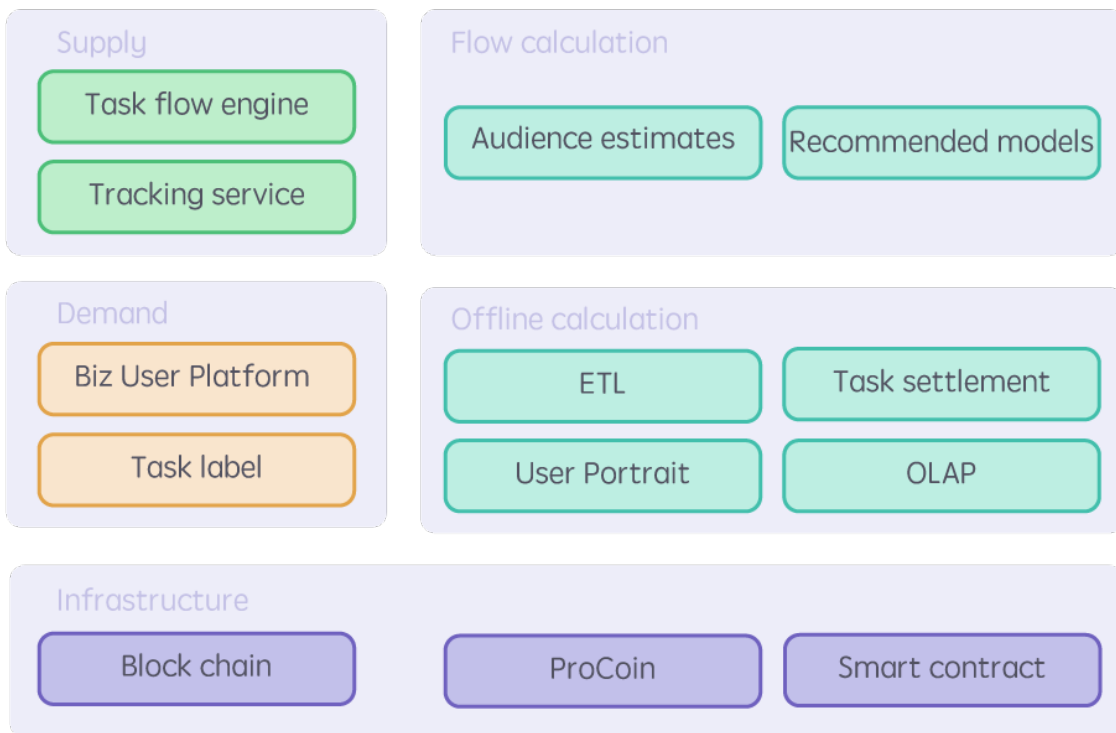
For a special account, it can be used as a quest issuer, but also as a quest promoter. ProChain will deploy a bidding mechanism to ensure the quests away from abusing. Each release of a contract is required to charge at least 1PRO. The full reward which divided by the target promoters' number can calculate the unit price. Each public quests can be sorted by time, unit price or bidding prize. Bidding prize is an additional bonus for promoters.

For enterprises, they can also choose private promotion mode. The project's promotion would only been informed by the users who know the quests' link, private contract will not show in the ProChain DApps.

## Accounts

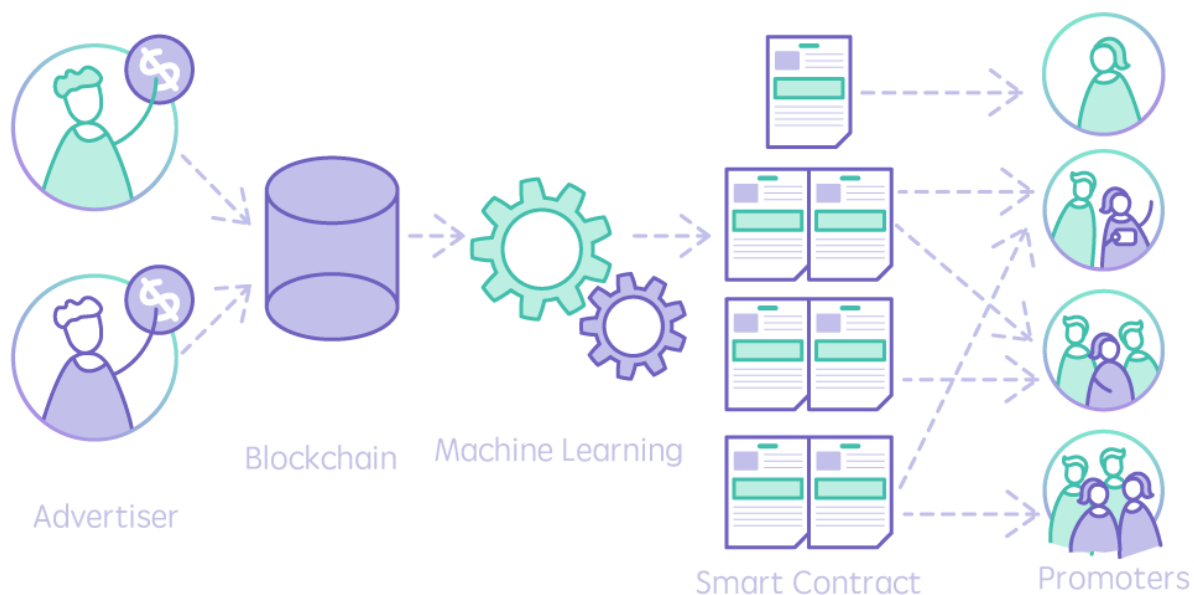
Through the EOS account system, we'll provide unique nicknames for accounts which are willing to pay a small amount of fees on ProChain. Based on the account system, relationships could be established between promoters. When a promoter complete a quest, all his/her friends will receive a notification. If one completed a quest through the promoter's notification or shared link, he/she will become a sub-member of the promoter on this quest. During the quest's viral spreading process, each account has only one unique precursor account. These information will be fully recorded into the ProChain's blockchain.

## Decentralized Quest Flow



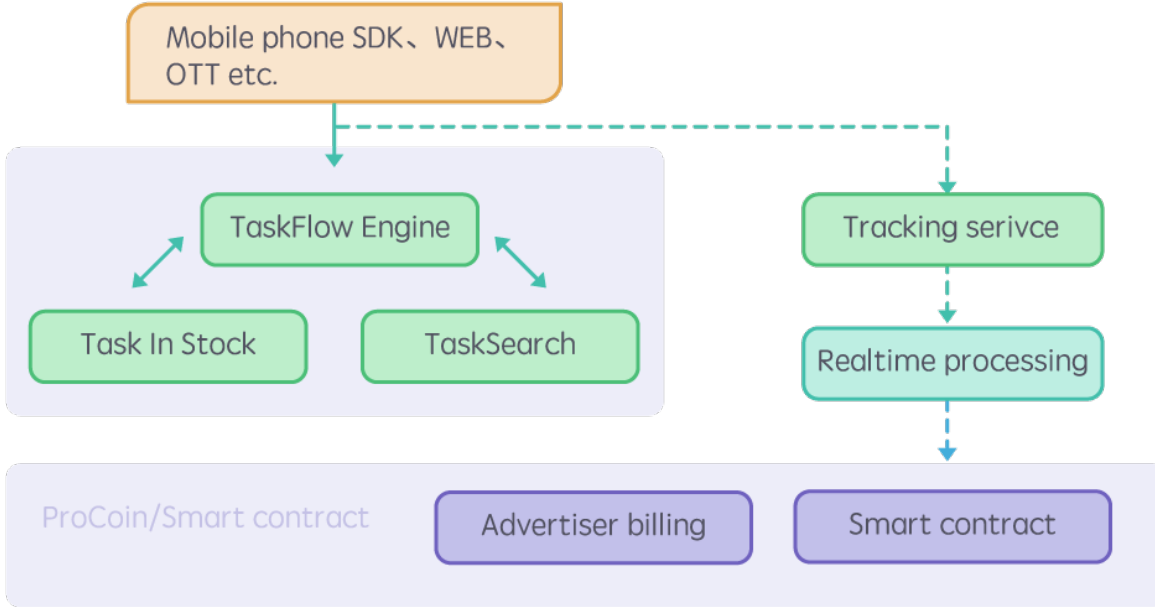
The blockchain itself is naturally a database. In the process of both sides by the transaction, the third party must know and verify the authenticity and legitimacy of the transaction. Therefore, based on the full-chain data, a decentralized quest flow engine can realize the personalized quest recommendation according to the user's preference through the data mining/analysis and the machine learning algorithm.

DQF data processing flow:





DQF distribution and tracking technical plan:



## Quest Matching Mechanism

In order to precisely locate the customers, ProChain will provide filters for the quest publishers. Such as account balance, POST weight, whether this account has finished a similar quest, credit rating, label settings and many other filters.

- Account balance: accounts should be above a certain limit which can claim the quest
- POST threshold: accounts should be above a certain POST weight that can claim the quest
- Whether have taken a similar quest: only new promoters can claim the quest
- Credit Ratings: according to ProChain's credit rating system, only high rating accounts can claim the quest
- Label matching: each quest can set up three labels (similar to the keywords in search engines), the promoters can query specific type of quests through the labels

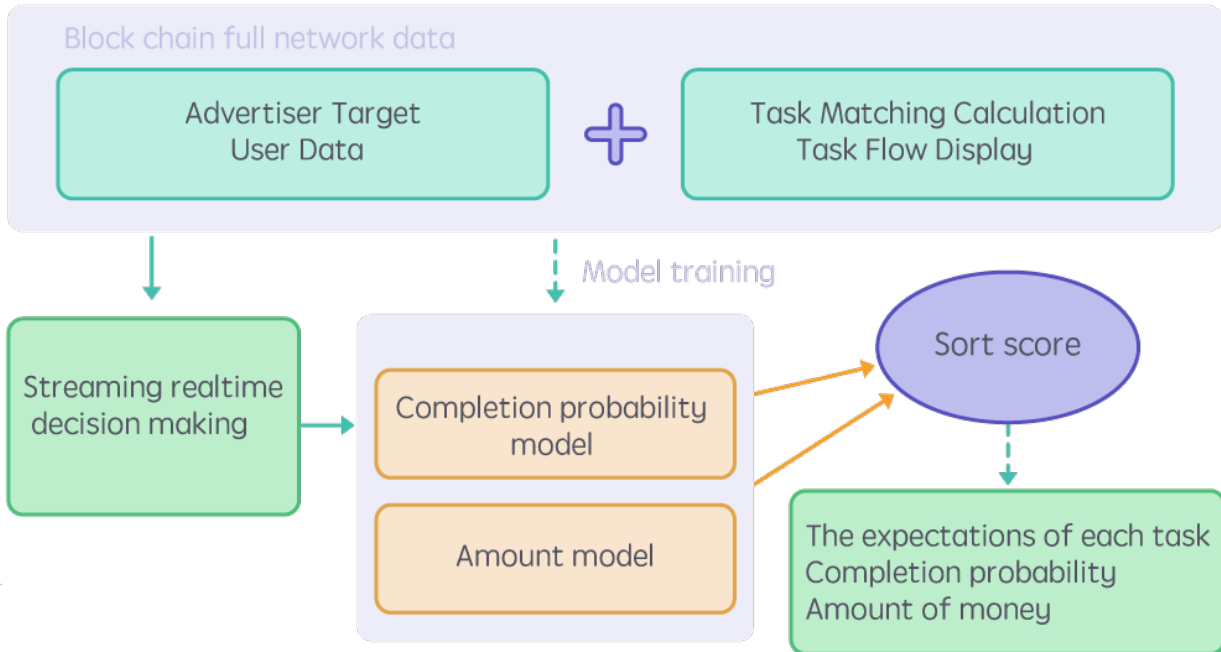
According to the Pearson formula, calculating the similarity between user and tags

$$sim(u, v) = \frac{\sum_{a \in P_{uv}} (R_{u,a} - \bar{R}_u)(R_{v,a} - \bar{R}_v)}{\sqrt{\sum_{a \in P_u} (R_{u,a} - \bar{R}_u)^2} \sqrt{\sum_{a \in P_v} (R_{v,a} - \bar{R}_v)^2}}$$

---

## Machine Learning Model (GBDT)

Model explanation: According to the full data of blockchain, as well as the advertiser's goal, the user's behavior preference, training sorting model to calculate the probability and amount of a quest's completion



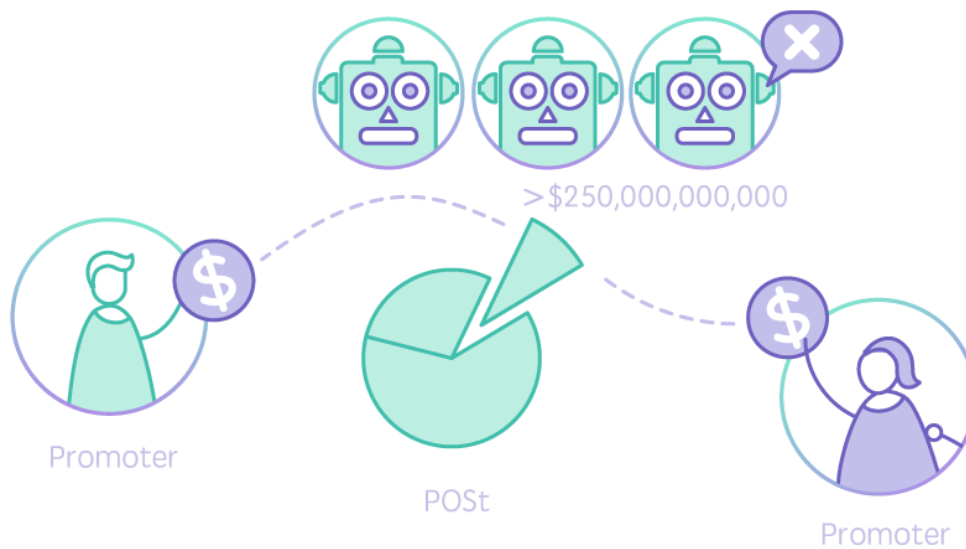
Using the GBDT model, the AUC (Area Under Curve) index was used to evaluate and validate A/B test in time.

## POSt Mechanism

POSt is based on the account balance “POS” and period that the balance stayed in the account. The specific calculation is:

$$POSt = \sum_{n \in N} PRO_n \times (TimeStamp_2 - TimeStamp_1)$$

In other words, an account that wants to claim a quest requires holding ProCoin, and ensure this part of the ProCoin is not traded for a certain period of time. This strategy can effectively prevent from bulk claiming quest by robots. When an account complete a specific quest, the account's POSt will be reset to zero and recalculated. The higher unit price of a quest, the higher POSt weight will be required.



## Refund Confirmation Mechanism

### Promoters

- For a certain quest, all users who meet the POST requirements of the quest can be promoters.
- A promoter can use PC / Html5 / SDK to generate a referrer link or QR-code.
- The users who complete the task by referrer link will be marked on the ProChain in order to determine the final reward share

### Users

- A user can complete a quest with referrer link or QR-code and associate it with the promoter.
- After a quest is completed, the user can generate their own referrer links for delivering the quest to more social relationships.

---

## User Growth

The seed users of ProChain comes from the community and ICO participants. At the initializing period of ProChain, we will provide a small share of tokens for enterprises for testing their marketing campaigns. The promoters who complete the quests can forward the quest to their own social network via Facebook, Twitter, Snapchat and any other social media in order to get more PROs and enlarge their followers.

## System Design

We will develop an EOS-based blockchain browser which is connected to the quests' database through a local synced blockchain or JSON-RPC. All contracts can be dynamically synchronized to the local database for efficient queries. Through the ProChain, the advertiser can query the status of a certain quest in real time. And the promoters can also check their sub-members who has completed the quest and calculate their shares of bidding prize. Before the blockchain storage scheme landing such as IPFS, ProChain will store high-volume static data such as images and videos through the traditional storage method. When IPFS deploys, ProChain will connect to these service for quests' data Storage and distribution

## User Client and SDK

Full platform coverage, including Mac, Windows, iOS and Android. We will provide SDK for other EOS Dapps to access ProChain. At the same time, ProChain will provide API data interface. Advertisers can directly dock their CRM system with it. Before the client releases, the ProChain users can claim or create quests via any EOS blockchain browsers.

---

## SCENARIO FOR USAGE

### Mobile App Installation

A mobile internet company has developed a new App, and willing to distribute this new App through ProChain. The enterprise set \$500,000 marketing budget and expect to get 500K installations. Then the advertiser buy \$500,000 equivalent ProCoins (assume 500,000 units) from the cryptocurrency exchange. Through ProChain the advertiser set up the evaluating method and promoting period, releases a smart contract with 500,000 PROs as a mortgage, the unit price for each installation will be 0.96 PRO. Of which 20,000 PRO as bidding prize for ranking a good position.

Alice noticed this quest among the biddings on ProChain Dapp, and her account meet the requirements. Then Alice click on the quest to learn more. After installing the app and move back to quest page, Alice click on "mission accomplished" at the bottom of the page, immediately get 0.96 ProCoin. And her friends on ProChain will received a message: "Your friend Alice just completed a quest, get 0.96PRO in reward, would you like to learn more?" So more and more people complete the quest and spread to their friends until the budget of 500,000 PROs exhausted. When the campaign finished in putting up, the ProCoins binding with the bid of 20,000 PROs will be allocated to Alice and other promoters who has completed the quest and succeed in developing sub-members.

└



---

## Token Distribution

A team is developing a decentralized application, the token is called CAT. The team hopes to get the Dapp's seed users, and willing to put 10M CAT tokens for early promotion. The team buy 100,000 PRO from the cryptocurrency market with the minimum amount 1 PRO to release a new quest. All the other 99999 PROs are set up for bidding prize. The one who watch the AD for 30 seconds can receive 1000 CAT with a total of 10,000 units.

Bob noticed the quest, watch the ad for 30 seconds, and then pop-up a "mission accomplished" button below. Bob gets 0.0001PRO after clicking meanwhile sends a transaction to the contract for claiming the CAT tokens. And then bob deliver the quest to his friend. When the quest completed, 99999 PRO will be distributed according to promoters' influence. Bob can claim his share by calling the smart contract. And the team will send CAT tokens later or automatically send them by smart contract in order to reach their goal.

## PROCHAIN DEV TEAM AND ICO RELATED

### Purpose for Crowdfunding

Raising funds through the ICO to initiate the ProChain project and distribute ProCoins. All funds raised will be put into product's development, team expansion, blockchain initialization, inviting consultants and so on. As the project carry forward, our team will gradually release reserved tokens for inviting and motivating high-level engineers to join the development team.

### ICO Schedule

The total amount of ProCoin is 10 Billion, and the ICO will last for 30 days. The fund-raising target is 6 million EOS, with the minimum of 3 million EOS. During the period of ICO, once the fund raised has been more than 6 million EOS, the ICO process will be terminated. No more than 6 million but more than 3 million EOS, according to the number of EOS invested to calculate the share of PROs with allocating a total of 6 billion tokens. In the premise of raising 6 million EOS, each EOS can be converted into 1000 PROs; if we raises 5 million EOS, each EOS can be converted to 1200 PROs; if we raises 3 million EOS, every EOS can be converted into 2000 PROs

---

In the premise of raising 6 million EOS, we will provide addition 10%, 8%, 6%, 4% and 2% bonus for ProChain's ICO with a gradually decay mechanism by the block height of Ethereum. Investors who invest ProChain's ICO at the beginning will receive a bonus of up to 10% ProCoins. The bonus tends to decay to 0% as the ICO process forwarding. During the first 10 days of the ICO, the bonus will be 10%. As time goes by, the bonus will be reduced by 2% every 4 days until ICO finished.

## Budget Allocation

Core Development Team 10%, all shares will be locked for one year and then release 1% per month

Early Investors and consultants 10%

Operating Fee 20%, Including 6% ICO bonus, advertisers' subsidy 2%, partners' subsidy 2%

ICO Crowdfunding 60%

## Team Members



**David Qi**

Data system designer, former Tencent business data analyst. Created Music-DAO GRASSU in 2009



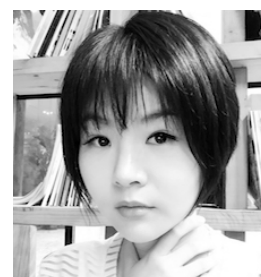
**Jinglei Zhang**

Core system designer, Full stack engineer, former Tencent engineer and engaged in the backend, search and recommend system development



**Yuyao Yang**

ProChain Dapp designer, Dummi Studio co-founder, Bitshares senior player, 6 years' experience in cryptocurrency investment



**Jiaying Liu**

Marketing, former NCFG Group TWT founder, ChunYu doctor co-founder, former Tencent user experience designer

---

## Co-founders & Consultants



**Yuanqiu Guo**

Senior VP of Ogilvy & Mather, his main customers including Mercedes-Benz, Jaguar Land Rover, Volkswagen, Lamborghini, Bentley, Bugatti and the 2008 Beijing Olympic Games



**Xin Liu**

Founder & CEO of Beijing Grouk Tech; CTO of Sina Wemeet; Founder of Hangzhou Yundong Tech; former Senior Director in UTstarcom; Senior software engineer in Motorola



**Pengzhu Li**

Beijing Ruizhi unlimited advertising media partners; seven wheat tech sales and marketing leader; WeChat open platform North China BD; former Tencent OMG technology center business development and government relations



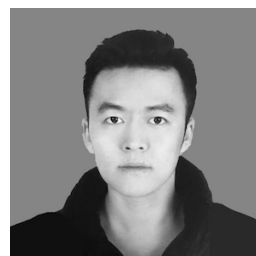
**Yongyi Lu**

Founder&CEO of SingSound Education; Partner&CMO of Beijing UniSound; 10 years' work experience in major Internet companies including Tencent, Phoenix, Renren, Duomi



**Yun Gu**

Didi financial technical director, itouzi Co-Founder & CTO



**Ji Rao**

Tencent WeChat business unit early employees, US Bay Area entrepreneur Edison core team members, responsible for data mining, 5 years' experience in cryptocurrency investment





**Xuan Wang**

Internet insurance business  
company "Wukong Bao"  
business VP, has worked for  
Schneider Electric, Sohu and  
Tencent and engaged in  
marketing & business operating

