ALAX

The Blockchain Game Platform for Emerging Markets

ALAX

Abstract

ALAX is a Mobile Game Distribution Platform based on blockchain technology with the intention of bringing fresh air to the gaming industry around the world. DECENT and Dragonfly join forces to bring games to everyone including people that are unbanked (over 2 billion according to Findex[1]) but have access to cash and 3G/LTE smartphones. Their aim is to provide a platform for content creators and gamers alike.

Customers will be able to access the ALAX Store using an application built using DECENT's library that will provide blockchain functionality. While content providers will have access to the ALAX Android SDK allowing them to include a range of features such as in-app purchases, rewards and more. Hence, consistency is secured across all the applications utilizing ALAX.

During the TGE ALAX will generate ALX tokens. These tokens can be then exchanged for ALA tokens, which can be used in the ALAX store. They will be offered to end users via internal exchange or using an existing reseller network of brick and mortar stores and mobile operators.

ALAX's four architectural layers manage all of these tasks. The transaction layer is responsible for managing all blockchain transactions between clients, publishers and the ALAX Store. The data layer stores all the content securely and reliably, while the ALAX Store itself provides the basic business logic on top of the data and transaction layers managing entities available in ALAX. The final layer, the application layer, is an interface for gamers and game developers.

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[1] http://www.worldbank.org/en/programs/globalfindex

ALAX

Table of Contents

Introduction

Emerging Markets have a substantial amount of unbanked people. According to the World Bank's Global Findex 2014[2], 2 billion adults were unbanked. Hence, most of them do not have access to credit and debit cards. However, they have an easy access to cash and 3G/LTE smartphones.

Thus, the market constituted of mobile game developers and emerging markets residents faces the following challenges:

As some people do not have access to credit cards or other means of payment via banks, but resort to paying only by cash, their access to some services can be severely limited. This creates a set of problems that although they are solvable tend to be exploited. If an unbanked end-user wants to purchase a game from a developer, a payment intermediary can set a high processing fee. Since there is no alternative for both sides, they have to accept the terms which can amount to up to 70% of the price of the game. This means that developer will make a lower profit and hence raises the price and the end user has to pay more for the app. Similarly, the provider has a longer time to settle the payments to the developer which can take up to 6 months and the developer has no choice but wait.

High fees
(SMS payments, scratch cards, ...)
up to 70%

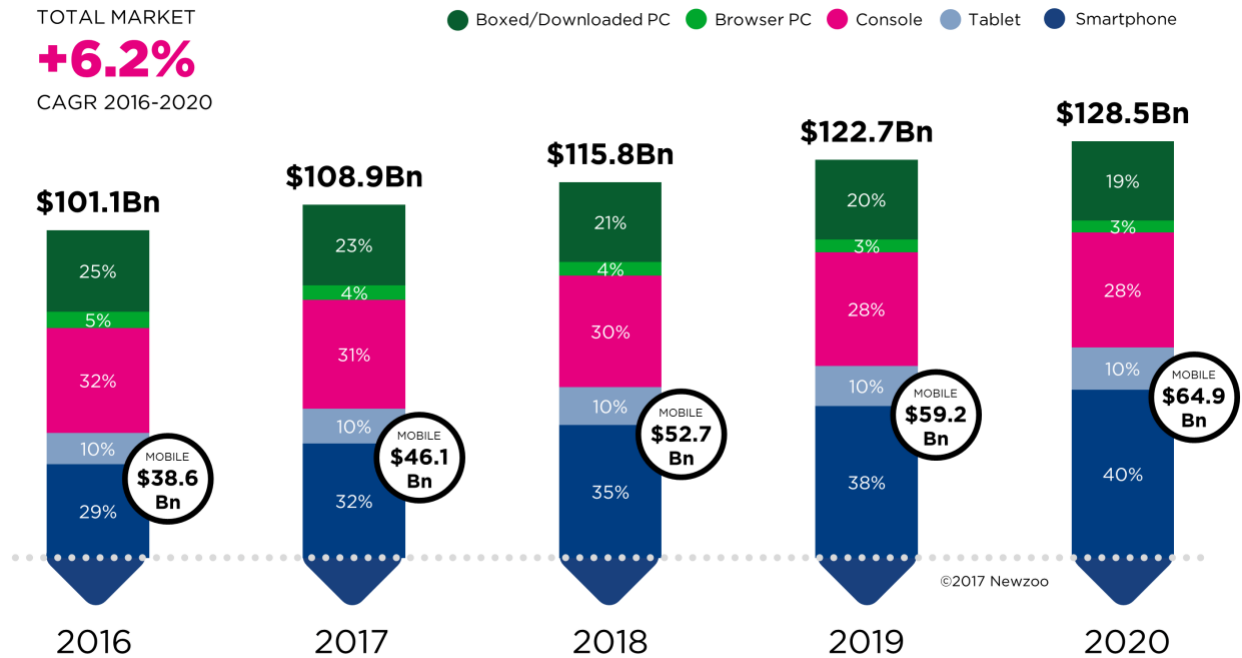**Long settlement times**
Up to 6 months until a payment
is settled

Unbanked users
Little to no access the means
of electronic payments

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[2] http://www.worldbank.org/en/programs/globalfindex

Market and Industry

2016 – 2020 Global games market - forecast per segment toward 2020
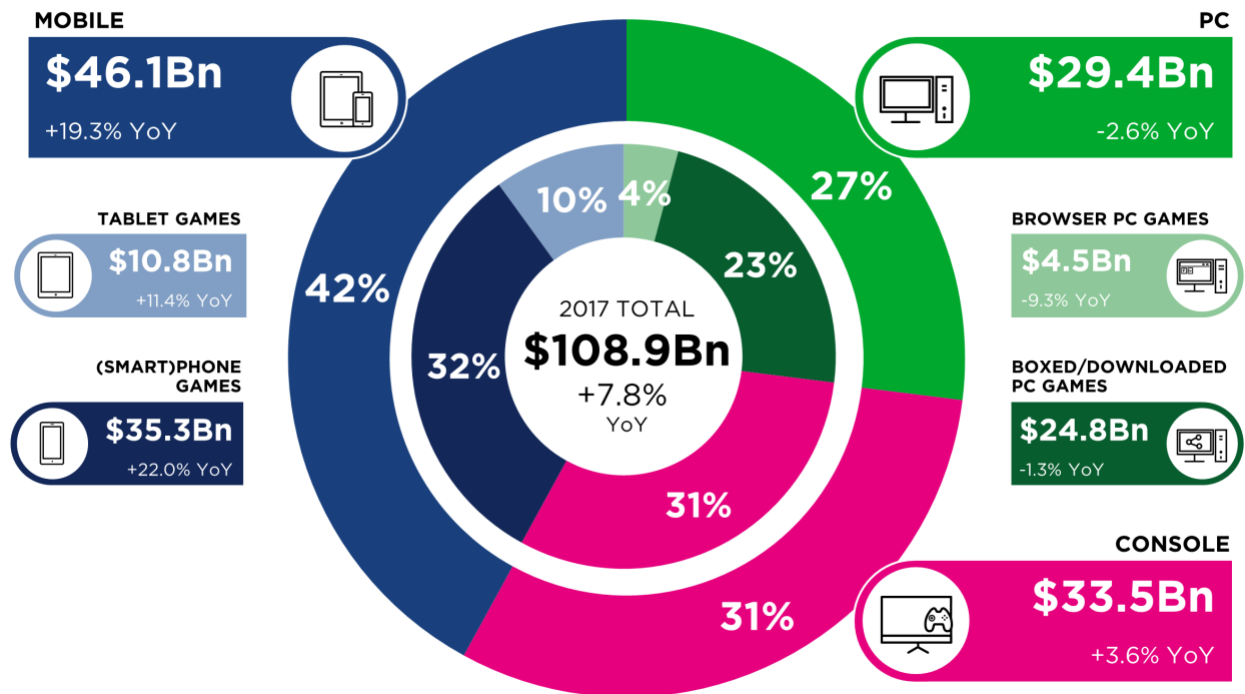

Source: © *Newzoo | Q2 2017 Update | Global Market Report*
newzoo.com/globalgamesreport

The global mobile games market is going to reach $64.9 billion by 2020. This represents almost a double compared to 2016.

ALAX

2017 Global games market – per device & segment with year-on-year growth rates

©2017 Newzoo

MOBILE
$46.1Bn
+19.3% YoY

TABLET GAMES
$10.8Bn
+11.4% YoY

(SMART)PHONE GAMES
$35.3Bn
+22.0% YoY

PC
$29.4Bn
-2.6% YoY

BROWSER PC GAMES
$4.5Bn
-9.3% YoY

BOXED/DOWNLOADED PC GAMES
$24.8Bn
-1.3% YoY

CONSOLE
$33.5Bn
+3.6% YoY

2017 TOTAL
$108.9Bn
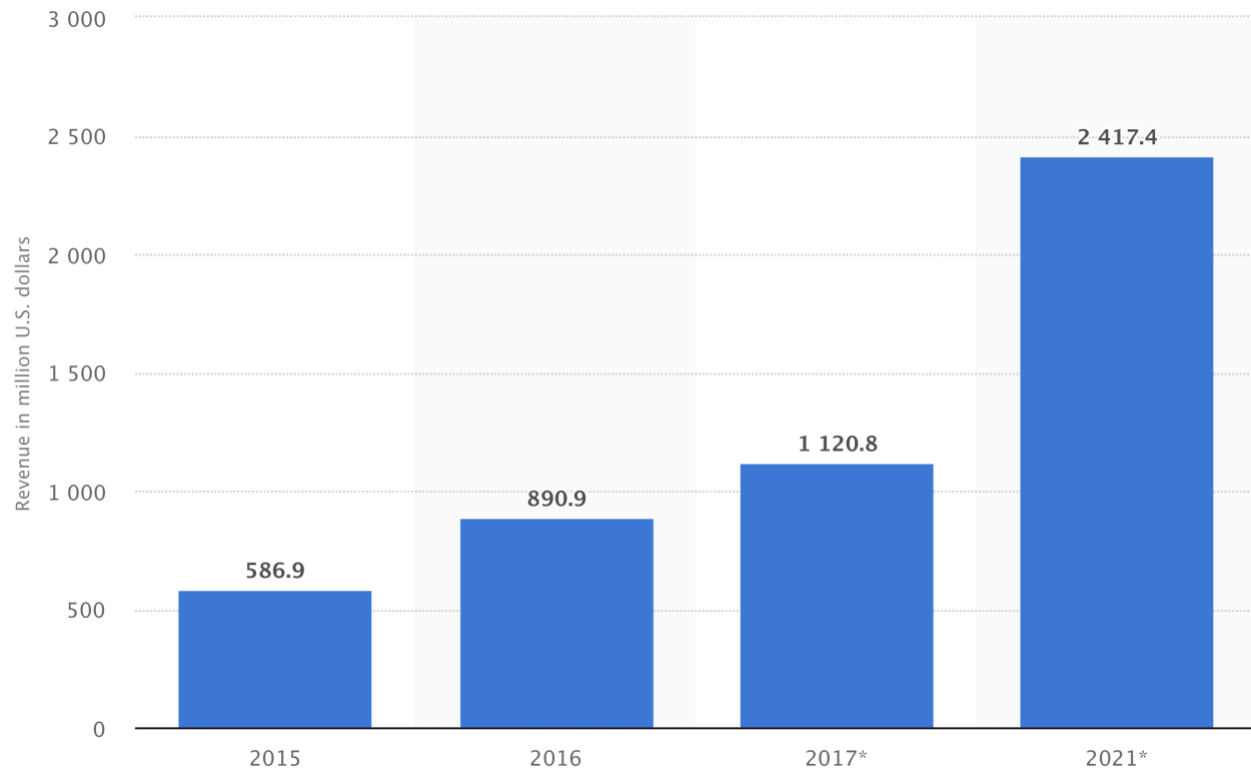+7.8%
YoY

10% 4%
27%
42%
23%
32%
31%
31%

Source: © Newzoo | Q2 2017 Update | Global Market Report

newzoo.com/globalgamesreport

In 2017, mobile games generated $46.1B, which constitutes 42% of the global market.

6

Mobile games revenue in Southeast Asia from 2015 to 2021 (in million U.S. dollars)

Source: © Statista 2018 | Media & Advertising | Video Games & Gaming | Southeast Asia mobile games revenue 2015-2021
https://www.statista.com/statistics/631514/southeast-asia-mobile-games-revenue

Mobile games revenue in South East Asia was $586.9 millions in 2015 and is expected to grow to $2.4 billion in 2021. Emerging markets consist of countries such as Thailand, Indonesia, India, Vietnam, the Philippines and some African, Latin American and Eastern European states.

Top 10 Android app stores in China – November 2017

IMAGE	RANK	APPSTORE	APPSTORE IN CHINESE	COVERAGE	CHANGE
	1	Myapp (Tencent)	应用宝	25.1%	-
	2	360 Mobile Assistant	360手机助手	16.1%	-
	3	Xiaomi App Store	小米应用商店	12.5%	-
	4	Xiaomi Game Center	小米游戏中心	11.9%	-
	5	Huawei App Market	华为应用市场	10.1%	-
	6	Baidu Mobile Assistant	百度手机助手	9.9%	-
	7	Oppo App Store	OPPO软件商店	7.9%	-
	8	Sogou Mobile Assistant	搜狗手机助手	4.4%	-
	9	Vivo App Store	VIVO应用商店	3.6%	-
	10	Vivo Game Center	VIVO游戏中心	3.6%	-

Source: © Newzoo | Insights | Rankings | Top 10 Android App Stores in China
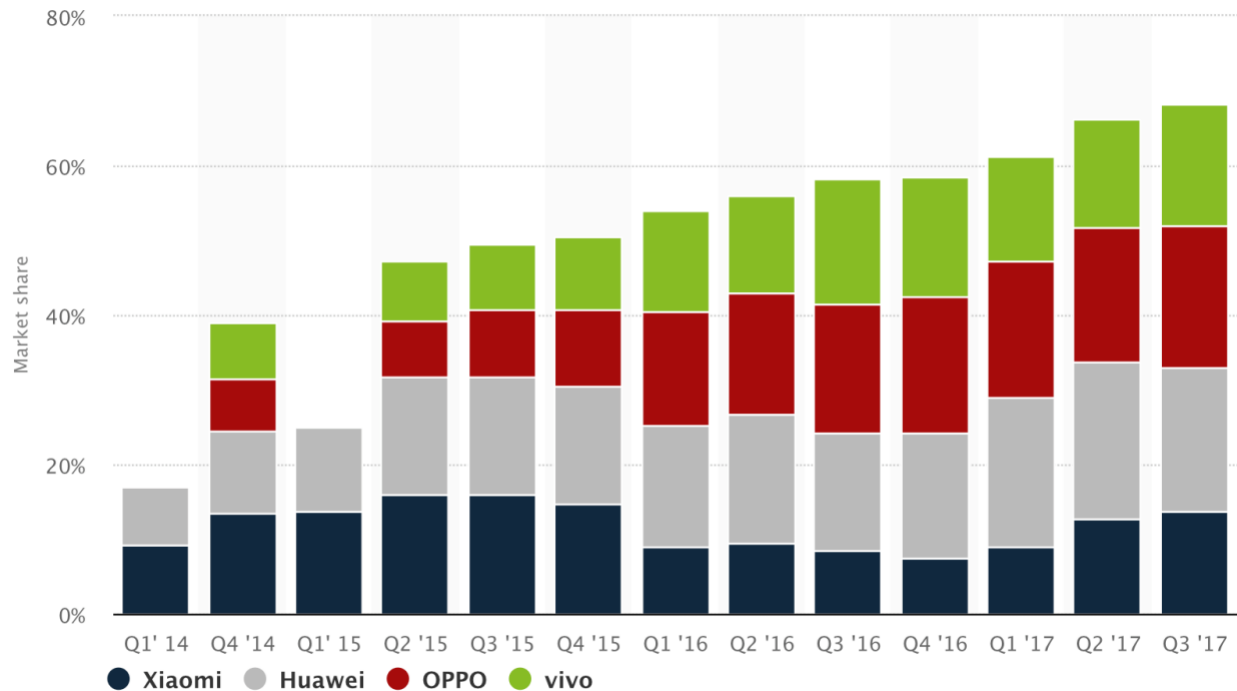*https://newzoo.com/insights/rankings/top-10-android-app-stores-china*

Google Play is not available in most of the Android phones bought in China. This includes mobile phones from non-Chinese brands, such as Samsung, Sony or HTC. The 4 main players in the mobile game and app store ecosystem cover 65.6% of the market. The total cost for the game developer can easily get over 70% of the fee charged when publishing mobile games in China and emerging markets[3]. This is well over the 30% charged by Google Play[4].

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[3] http://wnmag.com/2016/06/15/publish-mobile-game-china
[4] https://support.google.com/googleplay/android-developer/answer/112622?hl=en

Vendors' market share of smartphone shipments in China in 1Q'14 to 3Q'17

Source: © Statista 2018 | Technology & Telecommunications |China smartphone vendor market share shipments
*https://www.statista.com/statistics/430749/china-smartphone-shipments-vendor-market-share*

79% of the China smartphone market is dominated by 5 companies: Huawei, Xiaomi, Apple, Vivo and Oppo[5]. In Q1 of 2017, Vivo had a global market share of 5.2% in the smartphone market[6]. Oppo had an 8.2% global market share in Q3 of 2017[7].

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[5] https://www.theverge.com/2017/12/6/16741142/china-smartphone-market-stats-android-oem-2017
[6] https://www.statista.com/statistics/628558/global-market-share-held-by-vivo-smartphones/
[7] https://www.statista.com/statistics/628545/global-market-share-held-by-oppo-smartphones/

Chinese smartphone brand OPPO's shipments worldwide from 2014 to 2016 (in millions)
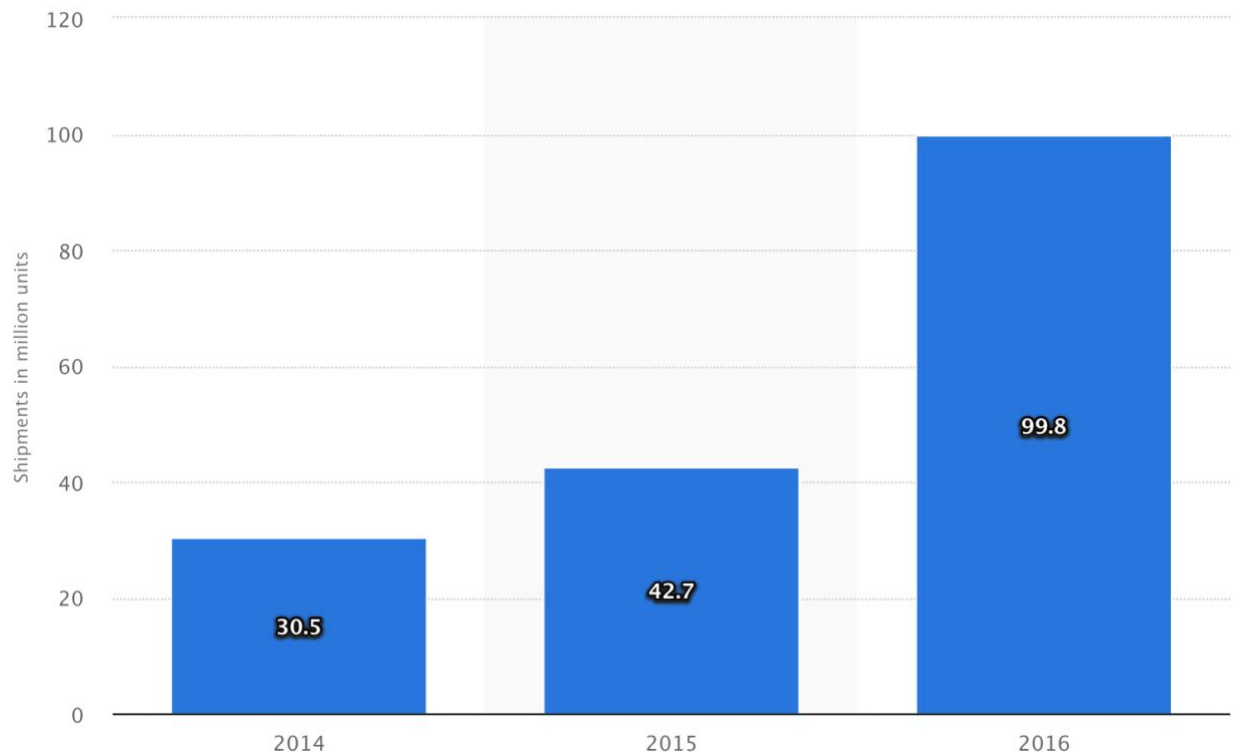
Source: © Statista 2018 | Technology & Telecommunications | OPPO shipments worldwide 2014 – 2016
https://www.statista.com/statistics/729562/china-oppo-smartphone-shipment-volume/

Vivo had **77.3M smartphones shipments** in 2016[8], which constitutes almost a 2-fold increase compared to 2015 and almost a 3-fold increase compared to 2014. Oppo had **99.8M smartphones shipments** in 2016[9] and a cumulative number of shipments equalling to **84.1M in Q1-Q3 of 2017[10]**. If one uses arithmetic mean, this will constitute to **112.1M smartphones shipments in 2017.**

[8] https://www.statista.com/statistics/541618/vivo-smartphone-shipments-worldwide
[9] https://www.statista.com/statistics/729562/china-oppo-smartphone-shipment-volume/
[10] https://www.statista.com/statistics/541609/oppo-smartphone-shipments-worldwide/

The ALAX Blockchain Game Platform for Emerging Markets

ALAX is a project with an intention to bring fresh air to the Gaming Industry around the world. The purpose is to develop and support Mobile Game Distribution Platform in emerging markets. ALAX is a Joint Venture (JV)[11] of DECENT[12] and Dragonfly[13].

About Dragonfly

Dragonfly is a distribution platform for apps and games, committed to serving the global community with a special focus in emerging markets (2.5 billion and growing). It was established in 2006 launching a Push news platform for mobile users, later on advancing into mobile gaming development and operations. In 2012 Dragonfly sets up offices in Shanghai, Beijing, Shenzhen and Taipei to keep up with the demand for its products. From 2014 up to 2016 it launched PayPal payment in more than 70 countries and expanded to other parts of Asia, as well as South America and Africa. They've pioneered an integrated mobile gaming application marketplace which now reaches more than 100 Million Active Users worldwide. Today it maintains consumer reach and steady growth with conveniently pre-installed mobile marketplaces on their channel partners' devices. (Vivo, Oppo, Huawei, Gionee, True, Jio, MMX, Advan, Mito and more.)

About DECENT

DECENT has created an innovative and customizable adaptation of blockchain technology, called DCore. Their blockchain takes advantage of the Delegated Proof of Stake algorithm for fast, energy efficient transactions with native protocols for file sharing and decentralized storage rewards. This functionality, plus the strong cryptography and trustless transactions native to blockchains, will allow DCore to revolutionize the way digital items are exchanged worldwide. DCore is an open source solution for companies looking to fast-track their own blockchain-based ideas.

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[11] https://decent.ch/en/decent-and-dragonfly-to-bring-blockchain-to-100-million-gamers/
[12] https://decent.ch/
[13] https://dmobi.cn/

Utility Tokens

ALAX is going to issue two tokens – ALX and ALA. While the ALA token will be used directly in platform (app-store) to pay for content (games and in-app purchases), ALX will be used to acquire ALA tokens on the one-way ALAX exchange.

ALA's value will be pegged to FIAT and therefore only ALX can be accessible on public exchanges.

ALA/ALX value will be set according to ALX/FIAT value on major public exchanges. To ensure market demand for ALX, there will be a 20% discount on ALA purchases using ALX tokens.

Use Cases

ALA tokens are going to be offered to end users via internal exchange, or an existing reseller network (brick and mortar store or mobile operators). End users can purchase games or use ALA for in-app purchases. Game developers can request payouts from ALAX, or use received ALA tokens as a reward for end users.

This is illustrated in the following use cases:
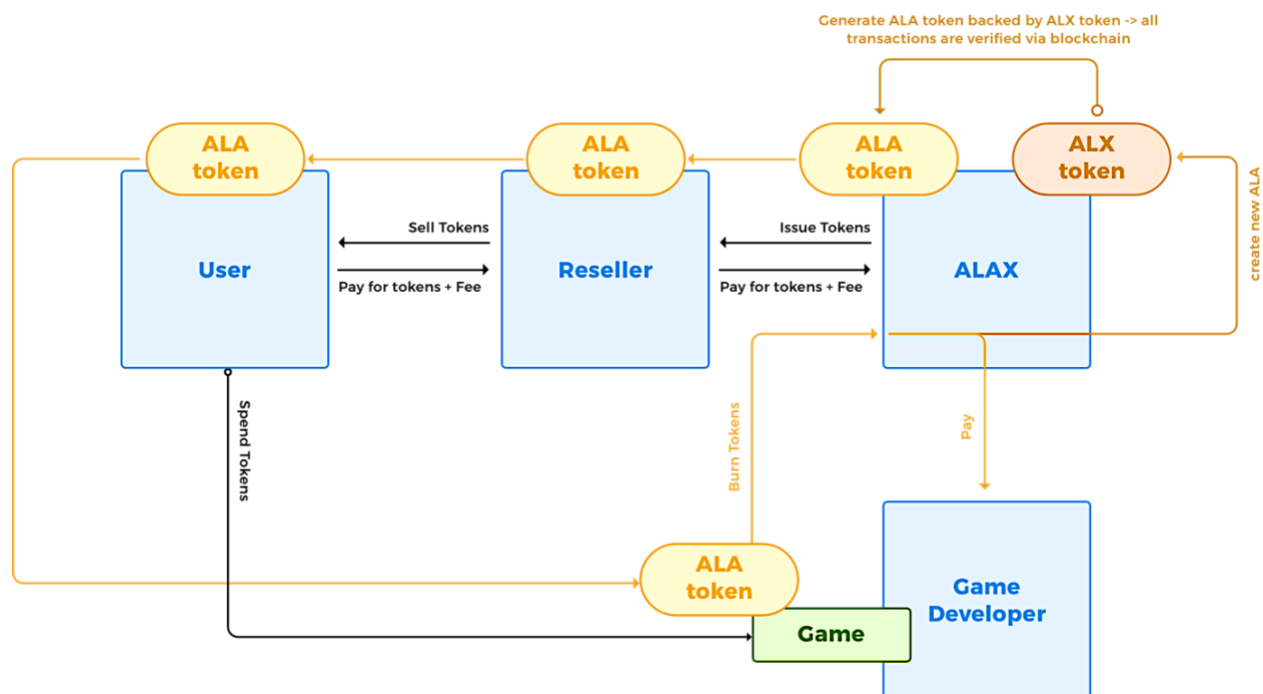
End user

The End user can obtain ALA tokens in a number of ways. A QR code card can be obtained in exchange for cash, the QR code from the card is then paired with the ALAX app, the tokens are then charged to the end user's account and can be exchanged for games or in-app content. The other way tokens can be obtained is through the app itself, either by using ALX tokens and obtaining a bonus or using a local payment method.

Game developer

After integrating the ALAX SDK into their app, the developers have a number of advantages. ALAX will take care of distributing their game through the existing pre-installed channels. After each transaction ALA tokens are transferred to the developer's account. The obtained ALA tokens can be used by the developer in a variety of ways: As a reward for the players to motivate them, for marketing purposes or it can be transferred to FIAT and paid out.

Reseller

There will be two types of resellers, brick and mortar stores or mobile operators and the app itself. Brick and mortar stores will receive ALA tokens from ALAX for a fixed price to which they can add an additional fee and then distribute them to the end users. On the other hand, if the reseller is the App itself there is no additional fee but a bonus if you use ALX tokens to obtain ALA tokens, there is also the possibility to use a local payment method, but in that case there is no bonus.

ALAX

ALAX will issue ALA tokens that will not be limited in number and their value is pegged to FIAT. If a game developer requests the pay-out of their ALA tokens then ALAX pays out the corresponding amount in FIAT, a certain fixed amount will be deducted as a processing fee.

Architecture

*Underlying blockchain technology*

Game developers would like to have a precise overview of the sales of their games and be able to ensure they are getting a fair deal for every purchase. In order to ensure the transparency between all parties in the process of purchasing digital content, blockchain is a good choice.

DCore blockchain developed by DECENT is a digital content oriented blockchain with fundamental support of purchase and distribution of digital assets such as mobile games. Moreover, DCore blockchain architecture is designed to have high transaction speed and the ability to process a high volume of transactions that is expected in marketplace applications such as ALAX. For content distribution, it is very important to be able to split revenue in a fair way between multiple parties involved in the development and production of digital content. DCore blockchain already has a unique build-in feature that supports automatic revenue splitting based on predefined rules. The combination of these features makes DCore able to provide the underlying layer on which the ALAX infrastructure can be built on.

DCore blockchain uses a Delegated Proof of Stake (DPoS) mechanism in order to achieve the consensus of various nodes in the network. Delegated Proof of Stake (DPoS) is one of the fastest, most efficient, and most flexible consensus model available. DPoS leverages the power of stakeholder approval voting to resolve consensus issues in a fair and democratic way. Deterministic selection of block producers allows DCore to decrease the block production time to 5 seconds. The principal miners' delegation is covered by a community of voters.

Application Layers

In order to provide all features described in the use cases, ALAX consists of four basic layers: Transaction Layer, Data Layer, ALAX Store and Application Layer.
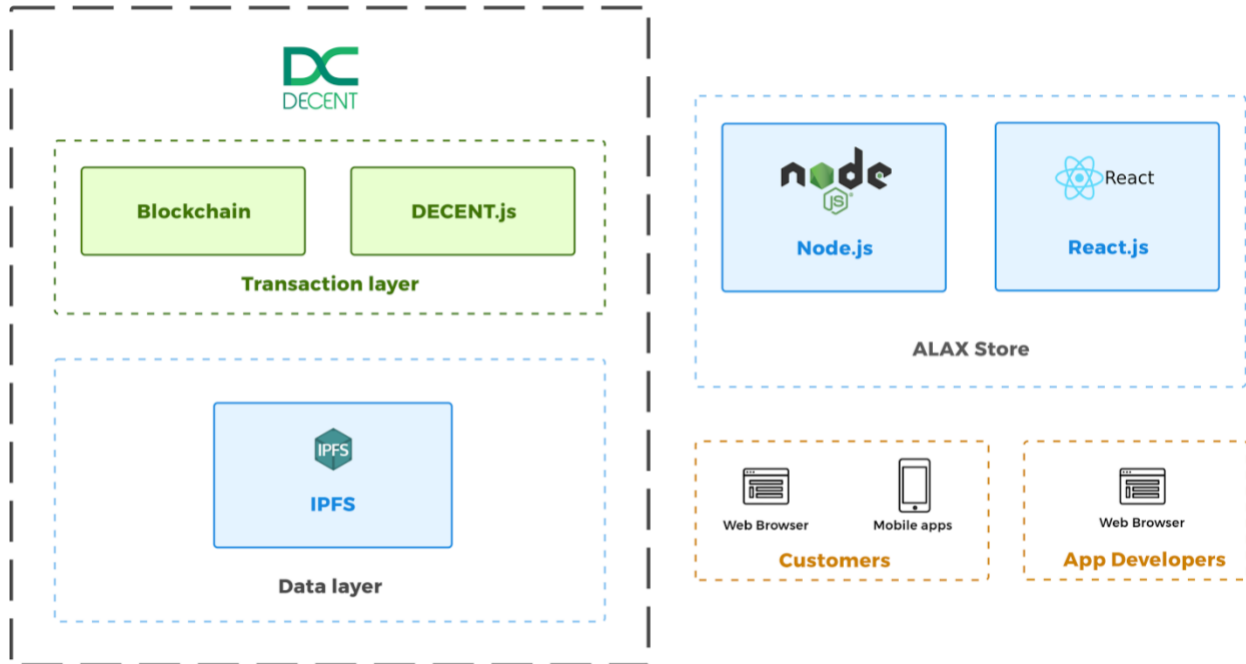
Transaction layer

The transaction layer is responsible for managing all blockchain transactions between clients, publishers and the ALAX Store.

Data layer

The data layer is responsible for storing all content published by game developer partners in a secure and reliable way.

ALAX Store

The ALAX Store provides basic business logic on top of the data and transaction layers and provides management of entities available in the ALAX service.

Application layer

The application layer is an interface for consumers and publishing partners (game developers). Consumers can access the ALAX service using web and mobile access. Publishing partners are able to access the ALAX Store infrastructure using web access where they manage their accounts and publish new mobile content (games).

Components

In order to secure maximum modularity and scalability, ALAX is a composition of standalone components. Each component encapsulates part of the application layers described in the previous chapter.

Transaction

ALAX uses a custom ALAX blockchain as a transaction component that is based on top of the existing DCore blockchain technology and can leverage all features and operations currently available in the DECENT network.

Storage

All published content is securely stored on IPFS infrastructure that will provide decentralised storage. Content stored on IPFS is encrypted in order to ensure that only clients with authorisation have access to it.

ALAX Store

The ALAX Store is a Node.js application that provides an interface for client's applications and handling management of entities in the application store. The ALAX Store communicates with the transaction service using DECENT's JavaScript library and providing content from the IPFS infrastructure.

Customer

Customers access the ALAX Store using web browsers or mobile applications. The web application is built on the React JavaScript library and uses the DECENT library that will provide blockchain functionality directly.

Mobile App

As part of ALAX, content providers have access to the ALAX Android SDK. Depending on the needs of a particular project, developers can use some or all of the features of our library of the ALAX blockchain. This will enable developers to include features such as in-app purchases, rewards, etc.
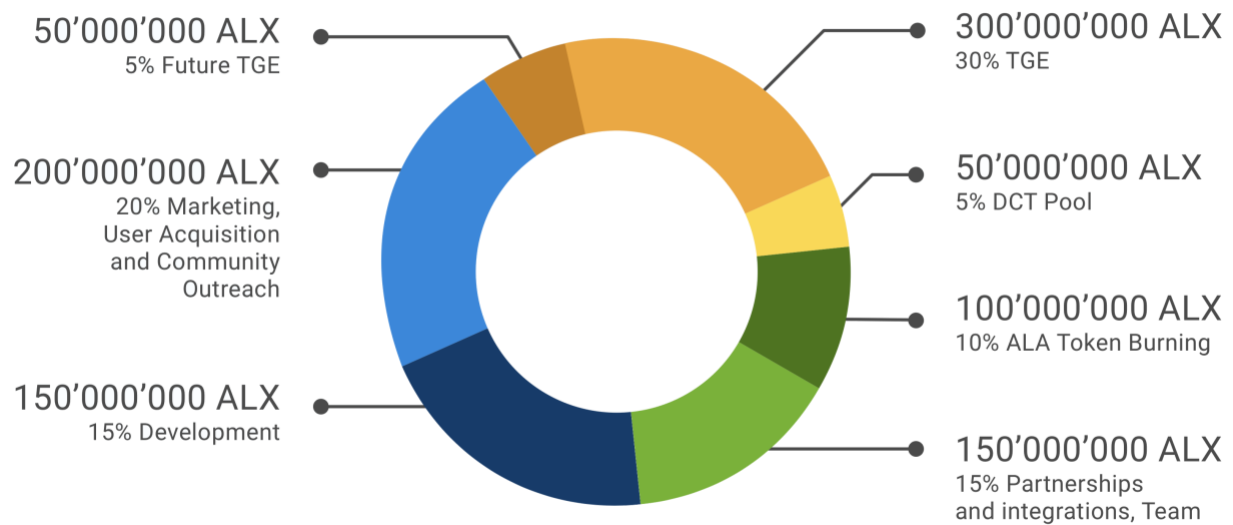
API structure

In order to secure consistency across all the applications utilizing ALAX, all applications will communicate with the ALAX protocol via API.

Token Structure

The total number of tokens is 1'000'000'000 ALX (one billion ALX).

ALX token structure is the following:

50'000'000 ALX
5% Future TGE

200'000'000 ALX
20% Marketing,
User Acquisition
and Community
Outreach

150'000'000 ALX
15% Development

300'000'000 ALX
30% TGE

50'000'000 ALX
5% DCT Pool

100'000'000 ALX
10% ALA Token Burning

150'000'000 ALX
15% Partnerships
and integrations, Team

50% of the ALX tokens not dedicated to the TGEs are going to be locked in for 12 months following the TGE.

Token Generation Event

ALX are going to be generated during the ALAX Token Generation Event (TGE). The TGE hard cap is set to **30'000 ETH. 30%** of the total number of ALX are going to be available during the ALAX TGE. This corresponds to **300'000'000 ALX.** The initial ALX value is: **1 ETH = 10'000 ALX**.

The following coins and tokens are accepted during the ALAX TGE for contributions:

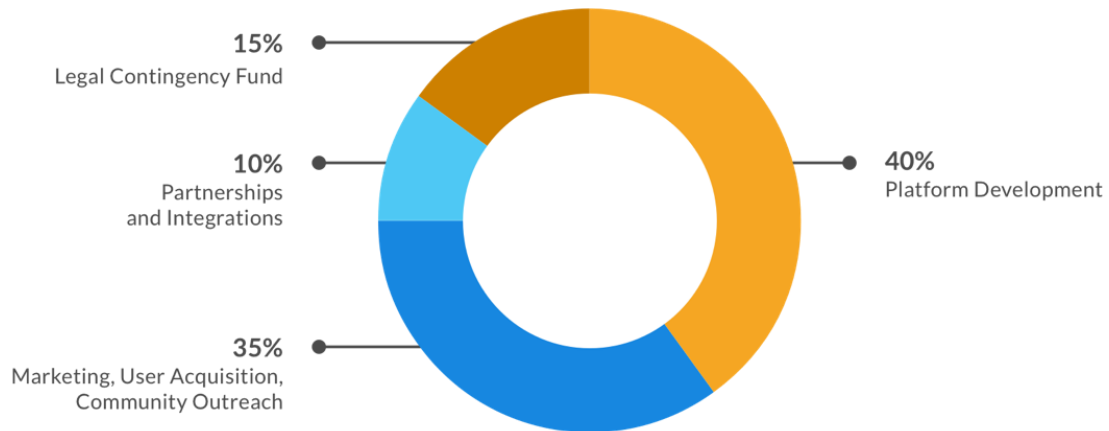| BTC | ETH | BCH | LTC | DCT | SPHTX |

and more...

Solely **ETH** value is determinant.
Start of the TGE is planned for Tuesday 17 April 2018, 10:30AM UTC.

The duration of the ALAX TGE is 6 days. This means that the TGE ends on Monday, 23 April 2018 at 10:30AM UTC. No ALAX TGE contributions are going to be accepted after this date. The ALAX TGE is made up of 2 rounds. First round is going to last from the beginning of the ALAX TGE until 165'000'000 ALX are distributed. There is a 10% bonus for the first 150'000'000 ALX in this round.

Second round starts after the first 165'000'000 ALX are distributed. There are 135'000'000 ALX dedicated to this round.

In case not all ALX tokens are generated during the ALAX TGE, they are going to be distributed to the existing TGE participants according to their stakes. No tokens will be burned.
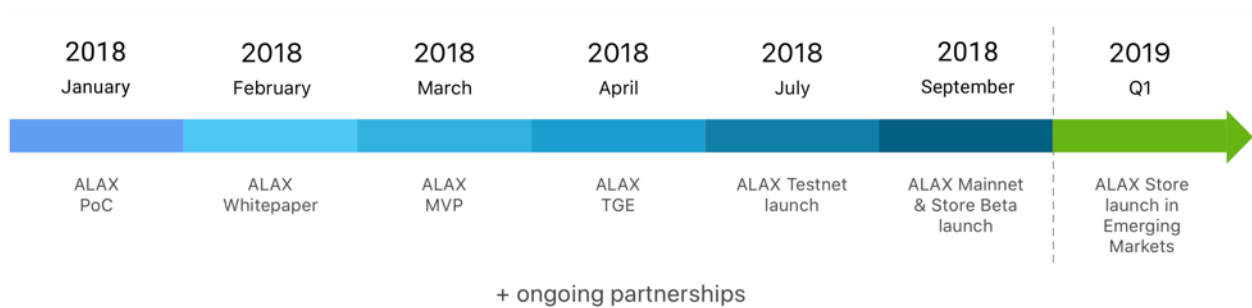
The TGE proceedings are going to be used in the following way:

15%
Legal Contingency Fund

10%
Partnerships
and Integrations

35%
Marketing, User Acquisition,
Community Outreach

40%
Platform Development

ALX tokens are going to be initially ERC-20 tokens. At the Mainnet launch, they are going to be replaced by DCore based assets.

If you are interested in the private round of the TGE please visit our website (alax.io) for more information.

Roadmap

2018 January	2018 February	2018 March	2018 April	2018 July	2018 September	2019 Q1
ALAX PoC	ALAX Whitepaper	ALAX MVP	ALAX TGE	ALAX Testnet launch	ALAX Mainnet & Store Beta launch	ALAX Store launch in Emerging Markets

+ ongoing partnerships

In the beginning of 2018 we had a working proof of concept. In February we released the whitepaper which you are currently reading. In March we will update our working PoC to a MVP after conducting thorough research and revision of the PoC.

The ALAX TGE will take place in April with a hard cap of 30'000 ETH, there will be no soft cap and the project will go ahead regardless of the amount raised.

In July we will be testing out the app in the final version before releasing it. After the successful tests are concluded the Mainnet is launched and the store is available in beta to the wider public.

In the first quarter of 2019 the ALAX Store will be fully operational and launched in Emerging markets.
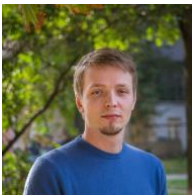
Team

Matej Michalko - Co-founder

Blockchain pioneer with 7+ years of Bitcoin, Blockchain and Cryptocurrency experience. He founded and is the CEO of DECENT. Matej organized China's first international Bitcoin Conference and also founded and led many Bitcoin, Blockchain and Cryptocurrency conferences such as BitcoinExpo, Central European Bitcoin Expo and BTC2B Congress. Matej founded the world's first Bitcoin Marketing agency in the world. He also founded the first Cryptocurrency e-Gaming Consulting Firm and served as a consultant on the Isle of Man.

Kalvin Feng - Co-founder

After gaining vast experience by working for global foreign companies, Kalvin founded Kason Technology, Inc., where he gained extensive knowledge in R&D, marketing and marketing of notebook computers, electronic components and mobile phones. He currently serves as the CEO of Dragonfly, a company dedicated to software, advertising and content development and big data analysis.

Tomas Koprusak – Project lead

With over a decade of experience in web development, marketing and product management at Sygic, Smart Media Star, IBM, and freelancing as well, Tomas is the perfect team leader to oversee the smooth operation of any project.

David Martinec - Operations manager

While at Aalborg University, David already began to delve into the world of Blockchain and after graduating he was ready to get hands on experience. He efficiently used this experience as the project manager of SophiaTX.

Zuzana Gonova - PR manager

Zuzana started out as a PR rep at a healthcare company and then was whisked away by DECENT impressing them by her formidable skills and forward-thinking while bringing SophiaTX to public awareness. This makes her an ideal fit to be the PR lead on ALAX.

Matej Nemcek - Blockchain and backend engineer

With Matej's background as a brilliant backend engineer and his enthusiasm for blockchain technologies, his know-how will be perfectly suited for developing the ICO platform. He founded the first Slovak hackerspace Progressbar which he runs in his spare time.

Peter Student – Solution Architect

Head of software development at a Digital agency, leading IoT initiatives, those are just a few roles that Peter has held over his 11 year illustrious career in various IT fields.

Marian Vanderka - Android developer

As one of the Android developers in DECENT he is an expert in developing applications in a number of languages such as Kotlin/Java/Scala/C++/Python and backend frameworks. His developer CV includes positions at companies such as Sygic, eGLU and Shizaru.

Michal Grman – Software developer

Michal started his career as a web developer. Later on when Apple announced the iPhone 3g, he switched to mobile development, which he solely focused on until he started working for Electrolux Global Connectivity. While there he switched to the field of IoT switching from pure mobile to full-stack and then to cloud development and architecture.

Gabriel Malicky - QA analyst

With a degree in radio-electronics and wireless tech, Gabriel decided to expand his knowledge to include IT. With an interest in cryptography and security he currently works as a QA Analyst at DECENT.

Ronald Filo - Technical Evangelist

With over 15 years of experience in various areas of IT, Ronald uses his extensive knowledge in providing the best possible solutions to software problems.

Patrik Csokas - IT Manager

Patrik holds multiple internationally recognized certifications, such as Project Management Professional and Professional Scrum Master. Thanks to his knowledge of SW development life-cycles he holds the position of IT manager at DECENT.

Juraj Jurik - Graphic Designer

Juraj has over 6 years of experience in UX, UI and Graphics design and cites Dieter Rams, Massimo Vignelli and Jonathan Ives among his inspirations.

Amer Owaida - Copywriter

Speaking four languages and living in five different countries Amer 's overview of different cultures and their nuances makes him uniquely equipped to handle any writing task you throw at him. He also holds a degree in translation and interpretation studies.

Martin Hassler - Community manager

Martin has worked in different startups and currently is one of our community managers. His knowledge of marketing and business provides him with unique insight when responding to our community.

Veronika Pilzova - Community manager

As the beloved community manager of SophiaTX, Veronika has ample experience in handling a vast influx of messages, while expertly dishing out just the right amount of information to her audience.

Dong Seob Choi - Community manager

Before ALAX Choi was working for CO Dep. of Samsung Electronic Slovakia. He graduated from the University in South Korea with a degree in Civil engineering and studied computer design in Tokyo, Japan. Choi has been an active volunteer for Korean Society of Slovakia for 5 years and he published 4 magazines and a story book in Korea.

Karen Ohara - Community manager

Karen joined ALAX as a Japanese speaking support team member. She has studied psychology at the Waseda University in Tokyo and now she doing a postgraduate in Europe. Karen is fluent in Japanese or English.
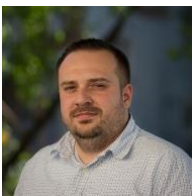
Marian Podmajersky - Blockchain Consultant/Engineer

With a doctorate and a vast experience in software design and development, and concept proofing of applications for Blockchain, Marian proves to be an extraordinary technical lead for the project.

Advisors

Xiaomin Wang - Advisor

Xiaomin is an experienced lawyer, engineer and Blockchain expert, with 5+ years of experience in the industry. She was part of the organization team of BitcoinExpo Shanghai 2014, BTC2B Congress Brussels and BitcoinExpo London 2015.

Tomas Varga - Advisor

Tomas is an experienced business professional with a strong track record of projects including four years in Management Consulting at KPMG. His responsibilities include business intelligence, development and partnership initiatives.

Peter Pongracz - Advisor

Peter is a seasoned business developer with a proven track record in Big Pharma, Venture Capital and Online advertising. He is a passionate blockchain evangelist who strongly believes that blockchain can truly disrupt traditional industries and reinvent the meaning of innovation as we know it today.

Glossary

3G - third generation wireless network

ALA -Non-volatile in-store token

ALX - TGE token

API - Application Programming Interface

DApp - Decentralized application

DCore - Proprietary blockchain

DPoS - Delegated Proof of Stake

FIAT - Currencies such as USD, EUR, GBP, etc.

IPFS - InterPlanetary File System

LTE - Long-term Evolution wireless network

Node.js - JavaScript runtime environment

QR code - Quick Response code

TGE - Token Generation Event

References

[1-2] http://www.worldbank.org/en/programs/globalfindex

[3] http://wnmag.com/2016/06/15/publish-mobile-game-china

[4] https://support.google.com/googleplay/android-developer/answer/112622?hl=en

[5] https://www.theverge.com/2017/12/6/16741142/china-smartphone-market-stats-android-oem-2017

[6] https://www.statista.com/statistics/628558/global-market-share-held-by-vivo-smartphones/

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[11] https://decent.ch/en/decent-and-dragonfly-to-bring-blockchain-to-100-million-gamers/

[12] https://decent.ch/

[13] https://dmobi.cn/