



leviar

AN ANONYMOUS, SECURE AND PRIVATE CRYPTOCURRENCY



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This is the first of a series of white papers intended to give stakeholders a clear overview of the Leviar project in all of its aspects. In this white paper, we discuss the problem and the market targeted by the Leviar project with a technical overview of the architecture of our platform.

Leviar Platform project and its new features. Leviar Coin is a privacy-centric marketplace and an integrated APP monetization platform over blockchain. The architecture and the design of the system will be explained, along with the technology adopted and future developments. Leviar Coin is a crypto-commodity and cryptocurrency generated and traded in the Leviar ecosystem. Leviar Coin is an open-source, secure, private and anonymous currency, based on CryptoNote technology.

Warnings (warranties)

This document does not constitute a prospectus of any kind. It is not a solicitation for investment and does not in any way pertain to an offering of securities. This document constitutes a description of the Leviar platform and the functionality of Leviar Coin.

Note: the paper is not final, the concepts presented in this document may undergo minor or major changes in the future.

Overview

Leviar is a project that aims to create an integrated app monetization ecosystem for the publishers, based on cryptocurrency and blockchain technologies. By publishers, we include mobile app publishers, desktop software publishers, web apps publishers, and content creators who have control over their publishing platforms.

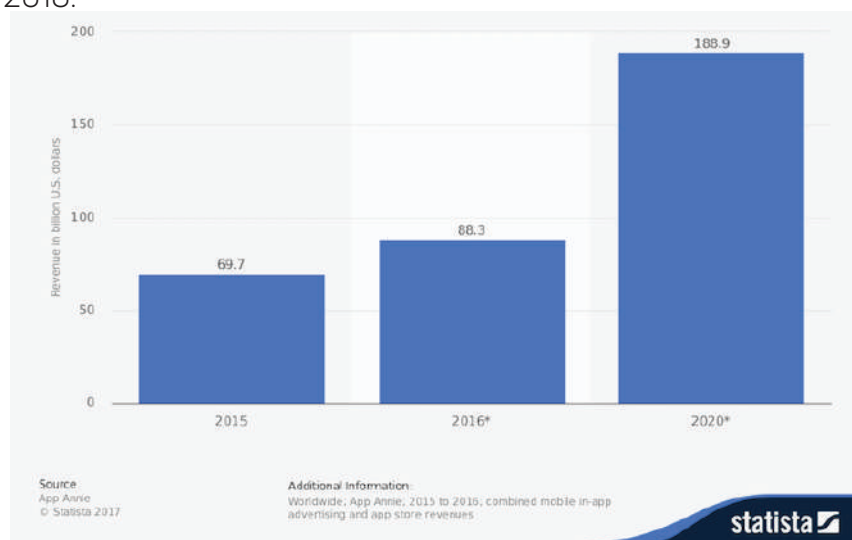
Our goal is to help publishers get the most ROI for their apps or websites while ensuring the best experience for their users, leading to a win-win situation.

Project history

The Leviar project started as an effort to build DRM over blockchain but it went through a major team overhaul and a new team was assembled. New objectives were fixed before building the DRM system; they are the subject of this paper.

The ecosystem

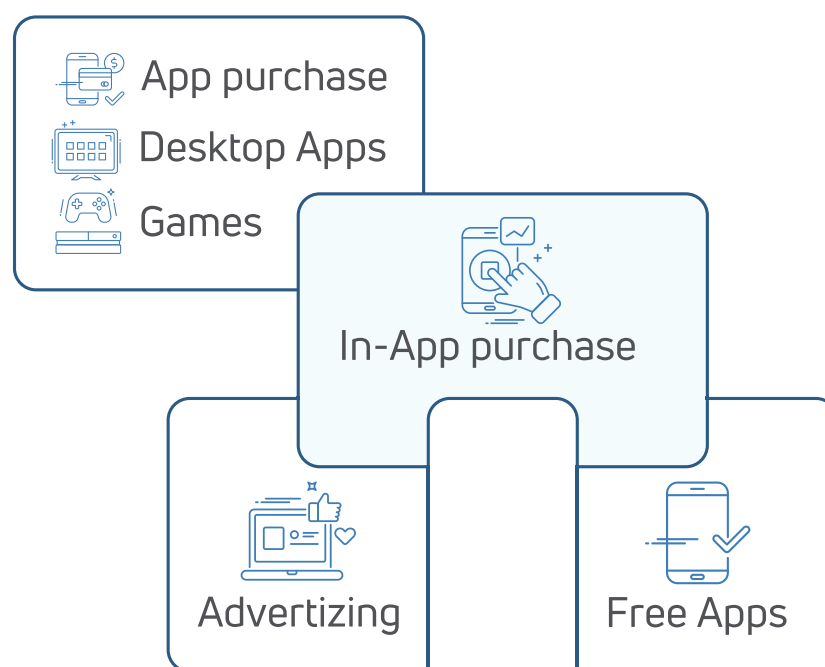
2016 was one of the biggest years in the history of the mobile apps and digital games market. This vast market, which hit \$88.3 billion in 2016, is growing at a tremendous rate and it keeps incorporating new media and platforms, thus expanding its reach. Going far beyond the traditional demographic, the audience of mobile users is now one of the most valuable and engaged demographics and brand owners are paying attention. In this report, we look back at the major data and insights of 2016 and 2017, with an eye on a massive 2018.



The apps and games market has started to mature and now more closely resembles traditional games publishing, requiring a new look into how we are monetizing those apps and how to make the user experience better.

The market we are targeting covers multiple ecosystems that do overlap in some areas. Those ecosystems are mobile publishing, desktop software publishing, and web publishing.


Each of these sectors already has monetization approaches, as shown on the figure below ("free" is included as a category in itself because publishers gain status and recognition even if there is no monetary income or if the data generated by use is what the publishers do monetize).



in next sections, we are going to explore each of these approaches and go into their pros and cons

- **App purchase:** By "app purchase," we mean being paid money for the buyer's right to own or use an application. The application may be a desktop app (software like Adobe Photoshop or a game like GTA V), a mobile app (a paid app or paid game like Monument Valley 2), a SAAS web app (like Salesforce, basecamp.com), or a content website (wsj.com, the Wall Street Journal site).

- **In-app purchase:** In this model, the app is usually free and the publisher earns money by selling items, add-ons, merchandise, etc. This approach is very common with video games.



- **Advertising:** : In this model, publishers enter into contracts to display certain ads to their users to promote the advertiser's offering. Usually, the publishers get paid by CPM (cost per mille) and the value depends on the keywords used and the demographic targeted by the advertiser.

- **Free:** The free apps model can be divided into multiple categories. An app may be free because its cost is paid for by some organization or institution that distributes the app for free. Or the app may be used as a reference for the publisher or the developer to gain a reputation that leads to some paid work. If it does not fall into the first or second categories, then the customer is the product, which means that the publisher is interested in collecting users' data for further exploitation (for other integrated products or a simple sale).

The problem

Digital publishing has gone through many phases and waves since its beginning. It was an exploding sector, especially after 2008, the year mobile apps were introduced to the public and the concept of the app store was brought to the public by Apple. During that gold rush, publishers started to make money on apps of all types, many of questionable quality, and a lot of them succeeded in making fortunes in those early days; many still do.

But in recent years, developers have had a harder time making money from paying apps, as the most recent data point to a continuous decline in the purchase of paid apps across the board, while we have noticed a rapid rise in free apps.

This phenomenon is due to many factors, but there are two main reasons: One is the noticeably high quality of the new free apps and the second is the rapid growth of the mobile advertising business to the point where publishers can earn more money through advertising than through app sales.

As all apps users know, the advertising model is broken. It is plagued with many challenges and difficulties. The only parties really profiting from it are the middlemen.

And, no matter what advertising networks say, no one likes to see ads, either online or on their mobiles.

The problems and challenges that face the advertising industry are:

- Effectively targeting high-value sources of growth.
- The propagation of ad blockers (even Google is getting into ad blocking).
- The advertising business is cornered by few actors that control the market and prices.

- Increasing costs.
- Elusive audiences.
- Ad fraud.
- The complexity of the advertising ecosystem and technology.
- Evaluating the effectiveness of content and brand marketing.

And we shouldn't forget the negatives of the ads on the end-users:

- Ads are getting more intrusive every day.

High-impact advertising

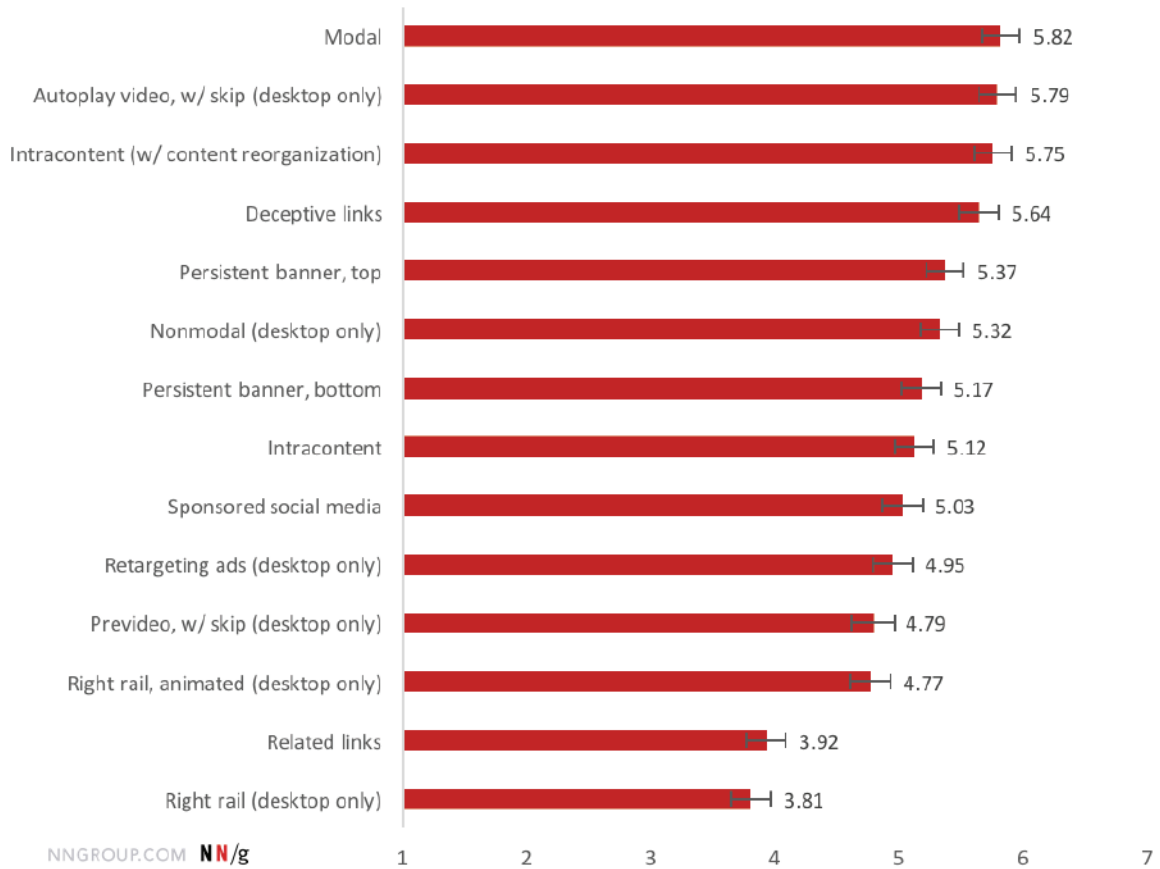
The number of high-impact ads run, by publisher site

Publisher ▼	1H 2013	1H 2014
AOL	13	212
Businessweek	5	37
CNN	36	54
Forbes	183	269
Huffington Post	105	120
LA Times	45	81
NY Times	44	61
USA Today	28	197
Vogue	13	76
WSJ	22	34

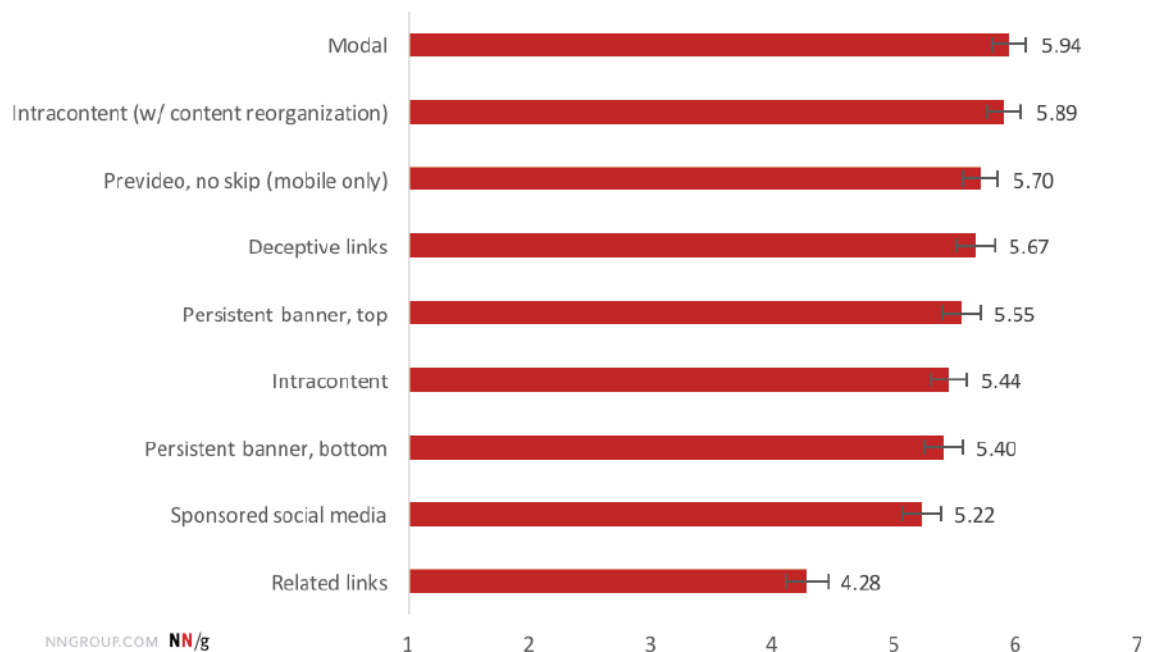
- Ads are very disruptive for the user experience; people simply hate being distracted while using their apps, no matter what platform they are on.



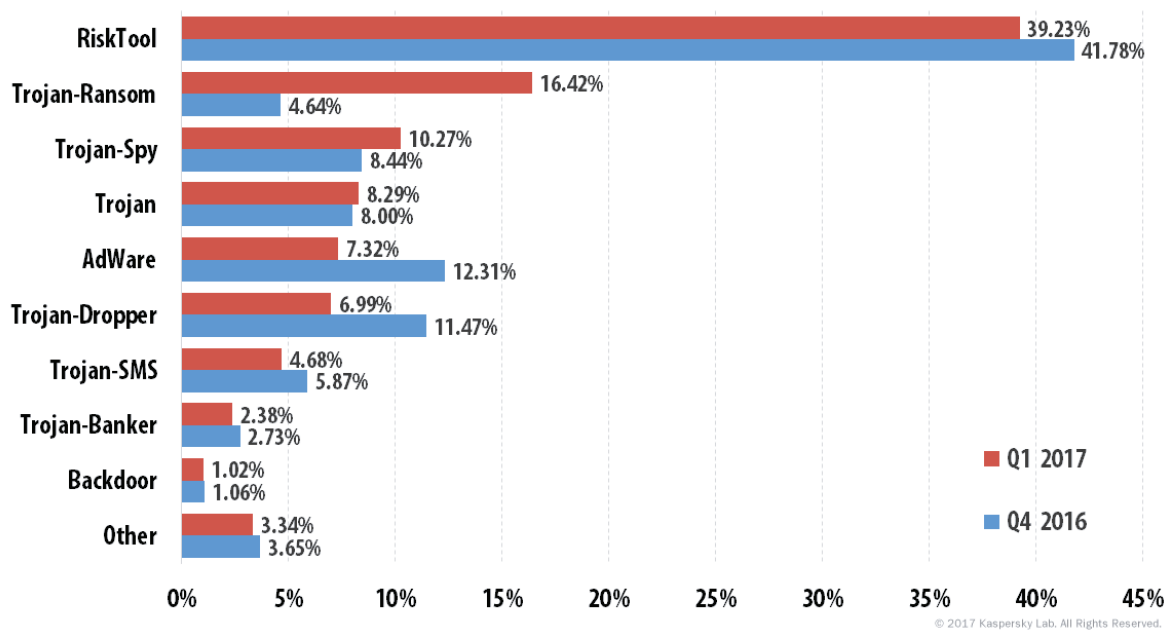
Average Ratings by Ad Type, Desktop (1=Strong Like; 7= Strong Dislike)



Average Ratings By Ad Type, Mobile (1=Strong Like; 7= Strong Dislike)



- Ads represent a big security concern



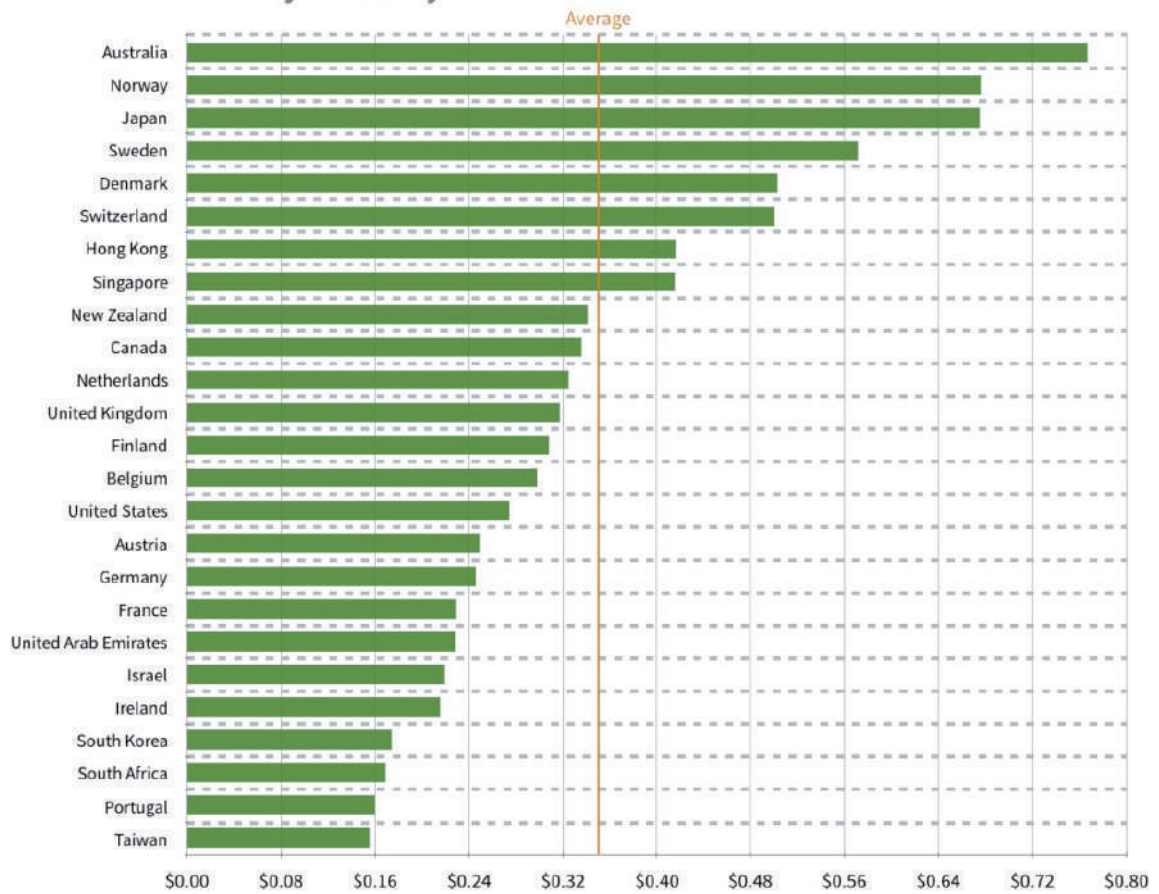
- Much slower page load time and unnecessary data usage.
- Ads might contain offensive/inappropriate content.
- Most ad networks do compromise the user's privacy.
- Many ads are misleading.
- Pop-ups are the worst of the breed.

For the free apps model, the story is a little different. Not many developers can afford to build and maintain a totally free app. The apps that are exploiting user data (the Googles of the world) are in a class of their own and the diligent and careful user can't fully trust them because they usually don't respect the user's privacy and they profit by tracking users' behavior.

The advent in recent years of crypto-assets and cryptocurrencies enabled developers to disrupt many established businesses and industries, just as the web did before them.

One other negative aspect of the advertising business is the current revenue structure. The CPM/CPC of different ads depends largely on many factors, such as geography, keyword (topic), and age and sex demographics. This structure has created a strong incentive to publish content targeting high CPM/CPC regions (like the USA) for some topics; this divide in pricing can create a void in apps aimed at areas and topics that are less demanded by advertisers.

CPC by Country



2016 Q3 Update



So if we can find another way to monetize apps that can level the playground so and African developer wouldn't have to target the US Market to earn a decent

The opportunity

The rise of cryptocurrency technologies and the large demand for them gave many publishers the motivation to use their apps and website to mine cryptocurrencies on their users' devices, either computers or mobile devices.

Most, if not all of those apps, do website mining without users' consent. And this is not good, if not illegal.

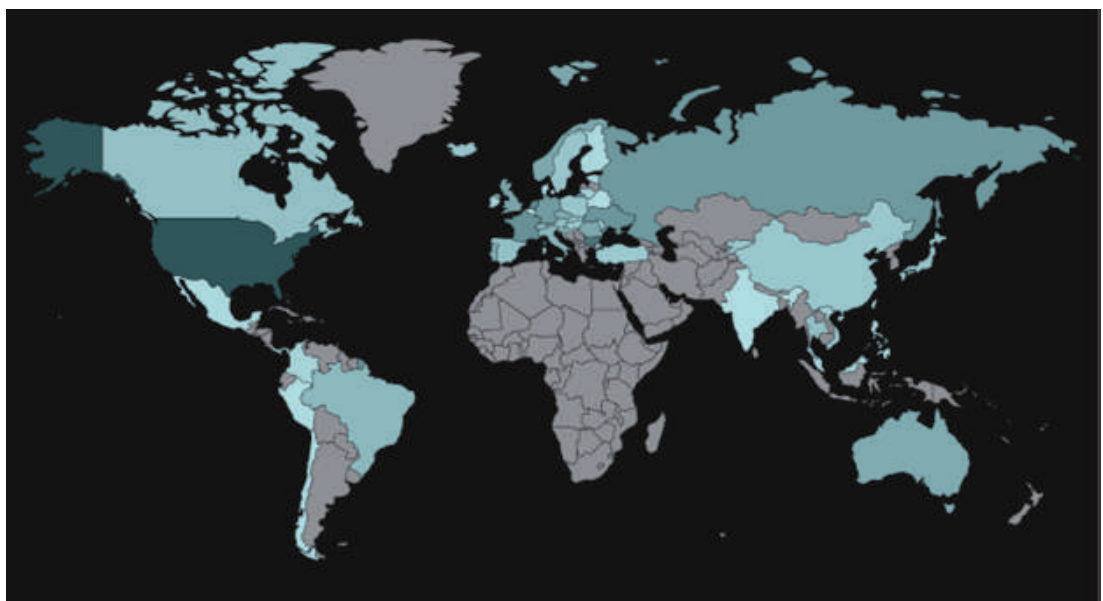
The idea of mining cryptocurrency on a user's browser to monetize a website was popularized by a site called Coinhive.

Coinhive provides a JavaScript library that can be invoked within a loaded webpage to start mining Monero as an alternative source of revenue.

As a service fee, Coinhive keeps 30% of earned XMR and the other 70% is given to the site owner.

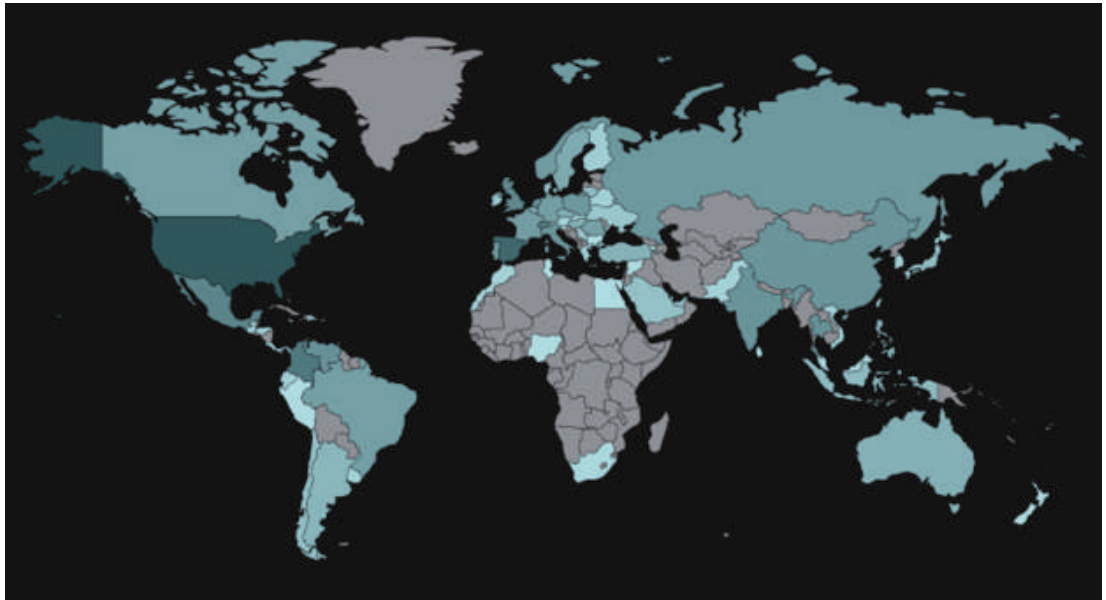
As a result, the user gets an ad-free experience on the webpage at the cost of some CPU cycles.

After the great success of Coinhive, many similar sites started offering the same formula. By October 2017, more than 2000 websites (unique domains) embedded mining scripts.



Geo-location of hosts/websites those adopted in-browser mining.

Source : zscaler.com



Geo-location of clients who accessed mining websites.

Source : zscaler.com

Our immediate objective is to build a platform that will allow publishers to monetize their applications and websites by mining on their users' devices, with their consent but with much more reasonable fees and without middlemen. And this mining is done with the consent of the user. End-users are prompted at the first launch of the application if they want to see ads or if they want to get rid of ads by allowing a reasonable amount of mining on their devices as a contribution for disabling ads and having a better experience.

The challenges

The main challenge in this concept (mining on users' devices) is technical, hitting the right balance, with the right amount of power dedicated to mining on the user's device to allow the user a good experience and earn enough cryptocurrency to make it profitable for the publisher.

The second challenge is to conceive a mining method that is mobile-friendly and ASIC-resistant, as power consumption and heating are the most problematic side effects of mobile mining (these challenges will be covered in a future white paper).

Leviar Platform

Leviar is an integrated set of tools, services, and SDKs with the main object of monetizing apps. Leviar is platform-independent (OS/hardware).

Leviar Components

- **Payment API**

The Payment API is the set of APIs that allows developers to implement payment systems that accept Leviar Coin as payment. The main application for this API is to be used for in-app purchases or as a reward system in gamified applications.

- **Monetization by mining**

Developers could monetize their application using Leviar's client-side mining SDK. The mining code will be embedded with the application and will run natively on native apps and on the browser in the case of web apps. The client will mine one of Leviar's pools and the publisher will get the coins mined in his Leviar wallet.

- **Advertising**

Users who opt out of the mining experience will automatically accept the displaying of ads on the app. Those ads will be pulled from Leviar's advertising network partners and a system will be developed to figure out the payment structure between the network and developer without creating another middleman.

- **Client-Side Integration SDK**

A client SDK library will be provided for publishers to integrate Leviar monetization functionality. It will use native code on every possible platform. On the web, a JavaScript library will be used.

- **Marketplace**

The decentralized marketplace is a major milestone for the Leviar project. It will be the launchpad for our DRM system.

- **DRM**

DRM over blockchain is the long-term goal of the Leviar project. Our team is working on building relationships with partners in this sector and on building all the components necessary to operate a DRM system.

Leviar Platform technology

● CryptoNote

CryptoNote is an application layer protocol that powers several decentralized privacy-oriented digital currencies. It is planned as an evolution of the ideas behind Bitcoin.

The main difference between the two technologies is that Bitcoin (like most digital currencies) is less opaque than CryptoNote-based currencies due to the latter's blockchain being almost anonymous, contrary to non-CryptoNote blockchains.

CRYPTONOTE FEATURES

● Untraceable payments

CryptoNote provides users with a completely anonymous payment scheme and implements the ring signature technology, which allows you to sign a message on behalf of a group.

● Unlinkable transactions

By using a variation of the Diffie-Hellman exchange protocol, a receiver has multiple unique one-time addresses derived from his single public key. After funds are sent to these addresses, they can be redeemed only by the receiver, and it is impossible to crosslink these payments.

● Double-spending proof

Nobody is able to spend the same money twice — even if all his signatures are anonymous. Every signature contains a key image. These key images are used to prevent double spending.

● Blockchain analysis resistance

Non-repeating one-time addresses and mixed keys in ring signatures make the whole blockchain resistant to analysis.

● Adaptive limits

A decentralized payment system must not depend on a single person's decisions, even if this person is a developer.

● Monero's child

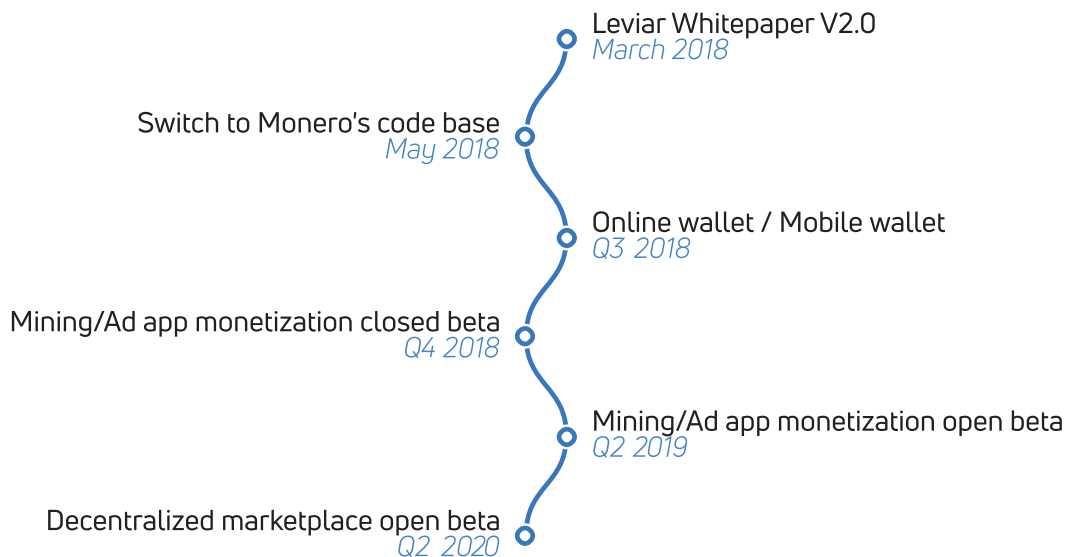
Leviar started out as a Bytecoin fork but, after seeing the great features implemented by Monero, the Leviar team decided to adopt and switch to Monero's code in order to get all of Monero's features (because we don't need or want to re-invent the wheel). Below, we list a few of Monero's features that are coming to Leviar Coin.

Monero is currently the best-known of all the CryptoNote-based cryptocurrencies and it has a very engaged community. With its privacy-oriented features, it became really popular with many online communities.

Monero was forked from Bytecoin in April 2014. Monero has been praised by Bitcoin core developers Gregory Maxwell, Peter Todd, and Wladimir J. van der Laan.

- ASIC resistance
- Stealth address
- Sub-addresses
- Ring confidential transactions
- Bulletproofing CT
- Multi-signatures

Roadmap



Community

Website and our social media:

Leviar: <https://leviar.io>

Twitter: https://twitter.com/leviarcoin_fdn

Facebook: <https://www.facebook.com/Leviarcoin1693633777611417-/?ref=bookmarks>

Telegram new channel: <https://t.me/Leviarofficialnews>

Our other communities:

Russia telegram group: <https://t.me/Leviarofficialru>

Spanish telegram group: <https://t.me/Leviarofficialspa>

Telegram Mining group: <https://t.me/Leviarminingofficial>

Discord community: <https://discord.gg/RdQzqk2>