



# LEVIARCOIN WHITEPAPER v1

BLOCKCHAIN DRM MANAGEMENT

IN-APP MICROPAYMENTS API

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In this white paper, we discuss the LeviarCoin project and its new features. LeviarCoin is a privacy-centric cryptocurrency based on CryptoNote. Initial coin offering (ICO) round details will be explained, as well as the future developments.

LeviarCoin is an open-source, secure, private and anonymous currency, based on CryptoNote technology.

Built into the main client will be implemented a software protection tool and a set of libraries will be released.



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## MARKET AND INDUSTRY

2016 was the biggest year in the digital games market and playable media world ever. The vast market, hitting \$91B this year, is growing at tremendous rates and incorporating new media and platforms, expanding its reach. Going far beyond the traditional “gamer” dynamic, the games and playable media audience 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, with an eye on a massive 2017.

Consumers spent \$41 billion on mobile games in 2016, driven by blockbuster hits like Pokémon GO and Clash Royale. The mobile games market has started to mature and now more closely resembles traditional games publishing, requiring ever higher production values and marketing spend.



# Interactive entertainment generated \$91 billion in revenues in 2016



**Consumers spent \$41 billion on mobile gaming in 2016, driven by blockbuster hits like *Pokémon GO* and *Clash Royale*.** The mobile games market has started to mature and now more closely resembles traditional games publishing, requiring ever higher production values and marketing spend.

**The first year for virtual reality was sobering, especially for manufacturers of dedicated hardware.** A high price point, the absence of a strong content line-up, and difficulties with properly delivering through retail cooled consumers' expectations of the Oculus. We expect firms with more experience in hardware manufacturing like Sony and HTC to take the lead in 2017.

**Despite its relatively small size (\$892 million), eSports has become the focal point for publishers, TV executives, and advertisers.** A string of investments in pursuit of connecting to a new generation of media consumers has built the segment's momentum, as major publishers like Activision, Riot Games, and Electronic Arts are exploring new revenue streams like selling media rights in 2017.

**Consumers increasingly download games directly to their consoles, spending \$6.6 billion in 2016.** The move improves margins across the board, and allows publishers to generate revenue through the sales of add-on content, expansion packs, and micro-transactions.

**At PC gaming continues to do well, earning \$34 billion and driven largely by free-to-play online titles and downloadable games.** Incumbents like *League of Legends* together with newcomers like *Overwatch* drive enthusiasm. PC gamers also saw a big improvement with the release of a new generation of graphics cards, offering a 40% increase in graphics power and a 20% reduction of power consumption.

\*Includes Social, PC free-to-play, PC subscription and Premium PC games

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Source: SUPERDATA

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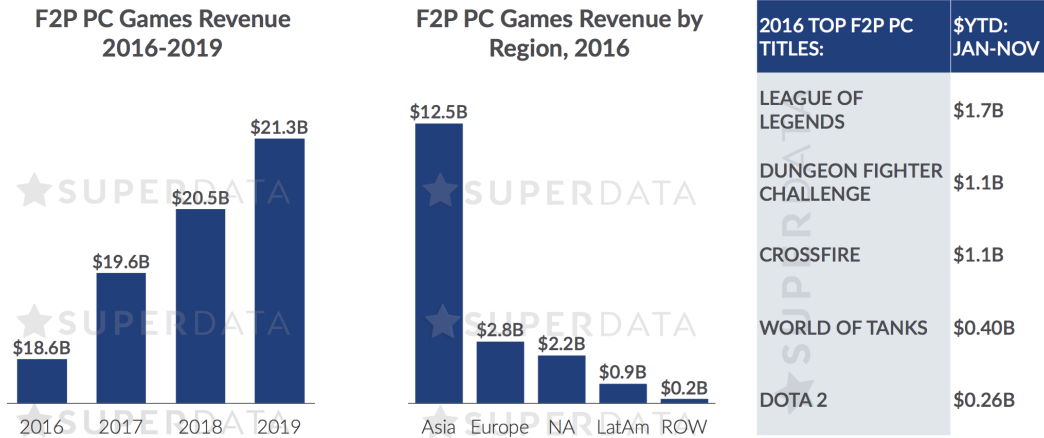
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PC gaming consoles to do well, earning \$34 billion and driven largely by free-to-play online titles and downloadable games. Incumbents like League of Legends together with newcomers like Overwatch drive enthusiasm. PC gamers also saw a big improvement with the release of a new generation of graphics cards, offering a 40% increase in graphics power and a 20% reduction of power consumption.



## Free-To-Play PC games market, 2016



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Source: SUPERDATA



## CRYPTONOTE FEATURES

### **Untraceable payments**

It 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 only be redeemed by the receiver; and it would be impossible to cross-link 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.

## **Egalitarian Proof of Work**

The proof of work mechanism acts as a voting system. CryptoNote brings this equality with its egalitarian proof of work, utilizing built-in CPU instructions, which are very hard and too expensive to implement in special purpose devices, but perfectly suitable for ordinary PCs.

## **Adaptive limits**

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



## LEVIARCOIN FEATURES

### **Integration API**

LeviarCoin daemon and DRMoB system communication is achieved by sending and receiving encrypted commands on the default port.

### **Anti-Fraud/Cheat System and DRMoB**

Is an anti-tamper technology and Digital Rights Management over Blockchain (DRMoB) scheme.

As well as to protect software integrity, is designed to prevent players of online games from gaining unfair advantage using third-party tools.

- Blockchain is immutable, changing the history requires too much effort compared to benefits
- High availability, virtually infinite scaling
- Blockchain is cheaper to use than known DRM servers
- Everyone holds a copy of Blockchain and no one "owns" it



## PROBLEM

The losses suffered because of software piracy directly affect the profitability of the software and mobile gaming industry.

Because of the money lost, publishers and developers have fewer resources to research and development of new products; having less revenue to justify lowering software prices, they are forced to pass these costs on to their customers.

Consequently, software publishers, developers, and vendors are taking serious actions to protect their revenues.

Using pirated software there is an increase of the chances that the software will not function correctly or will fail completely.

It is also worth noting that the use of pirated software also drives up the costs for legitimate users - which gives legitimate users even more reason to help fight piracy by reporting to SIIA those organizations and individuals who are not "playing by the rules."



## SOLUTION

The solution we want to give to users, publishers and developers is a blockchain DRM management software.

To accomplish the task, we based on CryptoNote technology, developing brand new features that help audience to protect its software and to make revenues trading XLC.

### **Integration API**

Integration API is a set of new commands bundled into the LeviarCoin daemon.

Its main purpose is to create an encrypted connection to the DRMoB Layer and directly serve required data to the user.

This is an example to better understand the purpose and how easily developers could use these commands:

```
./leviarcoind -iapi command *yourapikey* args
```

Initial available commands will be:

***getnewkey***: is the only command that works without providing a valid key, the system will generate a new key associated to your address.



Returns a JSON object:

```
{ "success": true, "code": 200 }
```

*storetransaction*: accepts a Base64 encoded string (max 512 bytes) that will be encrypted with your key and stored on blockchain

Returns a JSON object:

```
{ "success": true, "code": 200, "id": "4fd6c8b6a9cc3b0f9d8a87ae21eb9fc7" }
```

*readtransaction*: accepts an "id" in order to retrieve a previously stored transaction.

Returns a JSON object:

```
{ "success": true, "code": 200, "data": "previously_stored_data" }
```

## **Anti-Fraud/Cheat System and DRMoB Layer**

Every software and gaming company dreams to make their products and data as secure as possible using Activation servers, DRM servers, Anti-cheating software, etc. but these protections too much times get hacked or bypassed, for almost all softwares and games, in fact, you



can find illegal keys and/or cracked executables (like EXEs, APKs, IPAs).

Our final goal, by creating this tool, is to make available to software and mobile apps developers, a library to prevent these frauds.



## ISSUANCE OF COINS

XLC coins are generated with every new block, the initial amount of XLC is 8,100,000 and will grow to the limit of 54 million.

The generation gap of every block is 60 seconds, estimated coins generation in the first 1000 days:

Day 0: 15% (8,100,000 XLC) around 10 coins per block

Day 100: 17.8% (9,612,000 XLC)

Day 200: 20.6% (11,124,000 XLC)

Day 300: 23.3% (12,582,000 XLC)

Day 400: 25.9% (13,986,000 XLC) around 9 coins per block

Day 500: 28.4% (15,336,000 XLC)

Day 600: 30.8% (16,632,000 XLC)

Day 700: 33.1% (17,874,000 XLC)

Day 800: 35.4% (19,116,000 XLC) around 8 coins per block

Day 900: 37.5% (20,250,000 XLC)

Day 1000: 39.7% (21,438,000 XLC)

With this pace, around 40% of the maximum supply will be generated during the first three years



## CROWDFUNDING

Crowdfunding campaign starts on 7th April 2017 and will end on 9th July 2017.

A total of 5,400,000 XLC will be available to the public according to this scheme:

Quantity	Price (BTC)	Bonus Applied %
150,000 XLC	0.00030 BTC / XLC	40 %
525,000 XLC	0.00035 BTC / XLC	30 %
675,000 XLC	0.00040 BTC / XLC	20 %
1,350,000 XLC	0.00045 BTC / XLC	10 %
2,700,000 XLC	0.00050 BTC / XLC	0 %





Accepted currencies during ICO:



BitCoin



Ethereum



EthereumClassic



DASH



Monero



LiteCoin



Ripple

Altcoins change value will be calculated every hour basing on the average price across the main exchanges.

Every unsold coin will be put on the market at the fixed price of 0.00055 BTC / XLC for who missed out the main event.

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## ADDITIONAL RESOURCES

SUPERDATA: <https://www.superdataresearch.com>

CryptoNote: <https://cryptonote.org>

LeviarCoin BitcoinTalk post:

<https://bitcointalk.org/index.php?topic=1838617>

LeviarCoin website: <https://leviarcoin.org>

LeviarCoin ICO website: <https://ico.leviarcoin.org>

You can pre-register to be ready for 7<sup>th</sup> April.



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