SPHERIS

DECENTRALIZED APPLICATION MARKETPLACE

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Decentralized Application Marketplace

David Shabun
david@spheris.io

Sergey Tsyba
sergey@spheris.io

Vladimir Shabun
vladimir@spheris.io

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Abstract
Spheris is an open-source decentralized application marketplace, with a standalone solution for payment processing. Planned with a vision to eliminate 3rd party fees, Spheris platform aims to become the go-to place for developers who wish to be in control of their revenue, and consumers who wish to pay directly to the developers. With Ethereum's blockchain technology, new possibilities open up to disrupt the status quo and shift the paradigm toward giving more to developers and consumers, without the involvement of large corporate entities. In addition to providing a new distribution vector for developers, Spheris introduces customizable subscription options and validation for apps, a feature-extended crypto wallet solution, as well as optional decentralized storage solutions with other blockchain projects.

https://spheris.io

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1. INTRODUCTION

1.1. Background

A paper titled *Bitcoin: A Peer-to-Peer Electronic Cash System* was published by Satoshi Nakamoto in 2008, detailing methods of using peer-to-peer network to generate a system for electronic transactions without going through legacy financial institution channels. This was the start of a project that has had a profound impact on the way we see the internet as a vehicle for economic change. Bitcoin was the birth of a new economic revolution. The advent of Bitcoin enabled other projects to come into existence, and a stream of technological innovations ensued. Blockchain technologies, following Bitcoin's footsteps, have opened up possibilities to potentially shift the current paradigm regarding how we think about systems and frameworks that are inherently centralized. A formidable move toward decentralization is already underway:

- Cryptocurrency market total worth peaked at $116B in June 2017[1].
- Forecasts suggest the cryptocurrency market will be worth $5T by 2022[2].
- Japan recently recognized Bitcoin as a legal method of payment[3].

We believe that a secure decentralized approach for data exchange between parties is the future. The blockchain revolution has arrived, and with it – palpable change. This is an exciting opportunity for us to develop an array of new useful tools that will be especially designed for Web 3.0.

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[1] https://coinmarketcap.com/charts/

[2] https://cointelegraph.com/news/billionaire-fortress-investor-cryptocurrencies-will-be-worth-5-trillion-by-2022

[3] http://www.coindesk.com/japan-bitcoin-law-effect-tomorrow/

1.2. Vision

Cryptocurrencies have captured our interests from back in 2011. As we came to learn more about the technology and philosophy behind the idea, we started forming a vision of what can be achieved by utilizing these ideas in the context of software acquisition and distribution.

While formulating our vision, we went through numerous crypto-centric projects to get a better understanding of where the market stands, which types of solutions are being provided in our context, and how can we add something new and exciting to the mix.

We asked ourselves: *What if* developers had the option to sell their software without the hassle of dealing with bureaucracy, credit card companies and banks? Can we detach these corporate entities from the equation completely? Can such a system be offered without charging fees from developers? Can we offer a truly user-friendly experience to both developers and consumers? Is it possible to create a decentralized application marketplace, run *by* people - *for* the people? Is it feasible to design a sophisticated rating system that will make the whole marketplace self-manageable, whether people prefer to stay anonymous or not? *What if* the applications were actually stored on a decentralized storage platform?

With the rise of Ethereum and the technology to build DApps, we realized that the answer to all of our questions was a *resounding yes*. Our vision started to form into a concrete set of solutions, which we now call Spheris.

Spheris is grounded in the idea of decentralized application acquisition. We see a future where software developers have a direct gateway to reach new markets of consumers, with the ability to provide diverse ways of value exchange, securely and anonymously. Essentially, we aim to be the missing link between developers and consumers who are interested in purchasing or leasing software. Embracing decentralization will break the convention of having the need for third-party entities who collect fees on transactions. Removal of corporate entities, such as credit card companies and banks, becomes possible coincidentally with maintaining core interests of both developers and consumers.

The components that comprise the Spheris platform will give specific solutions to payment processing, software distribution platform and software storage. With a successful

technical implementation of our ideas, we intend Spheris to become the modus operandi in the decentralized software application payment processing market.

1.3. Why Software Applications?

Technology is one of the most important forces that drives the modern world. It took us a mere 70 years to advance from the first transistor to the cusp of a decentralized internet. Adoption of applied technology was, and still is, central to such rapid advancement. At the core, software applications are essential vehicles of applied technology. Today, more than ever before, anyone who is able to afford the necessary hardware – can start solving problems by providing solutions in the form of software applications.

There are more than 3 billion internet users as of 2015[4], all of whom are software consumers. The number of software developers is estimated at more than 18.5 million as of 2014[5]. Estimates for global software market value are around €250B in 2015[6]. Mobile app sales show an ever-increasing trend, with forecasts suggesting global consumer spending on mobile gaming apps *alone* will reach $105.2B in 2021[7].

The aforementioned numbers affirm the following set of assertions:
- Software market value will continue growing, as new consumers start adopting hardware and software, while existing consumers expand their buying interests.
- Developers pool will continually increase; consequently, increasing competition for market share.

The creation of a new decentralized software market will mark the next step in the natural evolution of Web 3.0, and with it, an entirely new business sector revolving around DApps.

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[4] http://www.internetlivestats.com/internet-users/

[5] https://www.infoq.com/news/2014/01/IDC-software-developer

[6] https://www.statista.com/statistics/221436/global-software-market-value-in-2011-and-2015-by-service/

[7] https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/

1.4. Why Ethereum Blockchain?

Ethereum's inception in 2014 marked a significant technological leap in the domain of decentralized cryptocurrencies. A distributed Turing-complete[8] platform has been introduced to the public, with which a plethora of different applications can be created. In essence, additional layers of depth and flexibility transform the development on top of Ethereum blockchain into something greater than solely providing alternative currencies. This inherent potential has contributed to the rise of many new, world changing ideas, and what we are witnessing right now is just the beginning. With a healthy dose of confidence, we see our project as an integral part of this '*decentralization renaissance*'.

Ethereum public blockchain allows the development of Spheris according to our vision; Smart contracts enable us to create custom functions that will form the backbone of our system. Blockchain storage protocols such as Swarm[9] or IPFS[10] provide decentralized storage solutions, giving developers and consumers another optional layer of decentralization.

More than that, philosophy is detrimental in our decision to develop on the blockchain:

*Ethereum's technology is a product of a philosophy that we share: a secure, **decentralized** space, fully functional in a **trustless** environment, optionally **anonymous** while solidly reliable.*

- **Decentralized**: No single entity holds the power. No fraud. No restrictions on who can participate. What's yours is literally yours and **only yours**.
- **Trustless:** There is no need for a trusted third-party to keep a ledger. The blockchain acts as a ledger, keeping records publicly for anyone to verify. Trust between two parties becomes irrelevant, since the system is designed to work by verification without you relying on the other party.
- **Anonymous:** Without the need for trust, anonymity becomes possible while keeping the system entirely reliable. You decide if you want to be seen or not.

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[8] https://en.wikipedia.org/wiki/Turing_completeness
[9] https://github.com/ethersphere/swarm
[10] https://github.com/ipfs/ipfs

2. IDENTIFIED PROBLEMS

2.1. Identified Problems: Finance

Financial aspects of selling software play an important role in incentivizing developers. Despite the fact that today's developers have many options to choose from when deciding how to distribute and sell their software, such solutions come at a functional and financial cost. To some independent developers, available solutions simply do not justify the amount of resources that would be required to work on their projects.

In the current state of the market, developers who wish to reach a large target audience often opt to feature their software in one of the leading software distribution platforms. But by doing so, they accept ***non-trivial platform taxes*** in return for increased visibility.

	Store Name	Number of Apps[11]	Registration Fee	Transaction Fee
Mobile	Google Play	2.8 million	$25	30%
	Apple App Store	2.2 million	$99/$299 Enterprise	30%
	Amazon AppStore	600,000	Free	30%
PC	Steam	15,600 games	$100	30%[12]
	GOG	2045 games	Info unavailable	30%[12]

Alternatively, if developers decide to distribute their software on their own, they must pay ***fees to credit card companies*** or other payment processors such as Paypal (who charge 2.9% plus $0.30 of the amount you receive). Expenses for web development and hosting, as well as marketing and SEO are also to be expected.

In either case, there is always a requirement to ***form a legal entity*** in order to able to operate and receive payments. This is an additional resource-consuming process, which can stop people from pursuing commercial software development.

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[11] As of 2017.
[12] Undisclosed by default. Based on market norms and dev speculations.

Admittedly, none of these inconveniences is a show-stopper per se, as can be seen by the numbers in the table above, but nevertheless, there are considerably large fees that developers must accept to pay in order to compete. As a result, developers either raise the prices of their apps to offset the fees, or lower the prices and earn less.

We offer a way for developers to distribute their software on a decentralized platform, without registration fees, without transaction fees[13] and without the bureaucratic hassle of creating a legal entity. The imposed constraints by today's marketplaces will not be relevant to developers who choose to use Spheris.

2.2. Identified Problems: Centralization

Centralized marketplaces have additional drawbacks when it comes to censorship and best practices. Submitted applications must be reviewed before being accepted into the marketplace. Due to the inherent centralized nature of such marketplaces, many *applications are rejected* for not following a certain imposed rule or guideline. The result is censorship that's not necessarily to the benefit of the consumer. For instance, applications can be rejected if they can be seen as direct competitors to the company that operates the marketplace, or perhaps due to having certain functionality that can be construed as undermining said company's assets.

Anonymity is not possible under such centralized circumstances. Developers who wish to capitalize on their software must share their identity, in one way or another. This becomes a problem if developers wish to sell software that is deemed controversial by central authorities. For example, in various countries around the world, software that incorporates a political message can be automatically marked for censorship and put its developers in danger of prosecution.

We build Spheris with these problems in mind. Our marketplace will act as an organic ecosystem of applications, where consumers hold the power to decide on the merit of applications. With no restrictions, by default and by design, it will be up to the community of consumers to decide what is worthy and what is not. Optional anonymity is an essential part of a decentralized system, which is why it will be available and safeguarded under the Spheris platform.

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[13] Excluding Ethereum gas fees, which are mandatory to keep the blockchain functional. These fees do not go to Spheris. To put this into perspective, average gas fee in July 1st 2017 was 0.00000002ETH ≈ $0.0000054.

2.3. Identified Problems: Decentralization

Being bound by the blockchain framework means that we might be creating new problems that need to be resolved in order to have a comfortable user experience. One problem would be the inconvenience of keeping up with the different software that consumer buys, as well as keeping track of all subscriptions (daily/monthly/yearly/other). How will consumers be able to easily handle *subscription management*? Crypto wallets that are currently available cannot accommodate consumers who will be using the Spheris platform.

Another problem that is crucial to resolve is *malicious software*. How will a decentralized application marketplace be able to filter out all the scams, viruses and malware? By not having centralized moderation, the moderating power is at the hands of consumers, and so there has to be a mechanism with which moderating can be successfully accomplished, i.e. decentralized governance.

Lastly, a truly decentralized environment can be achieved if each related component is decentralized on its own. Consumers who purchase software require means to acquire it, be it physically or digitally. But these means break the decentralization chain. How can we accommodate developers who wish to *host their software* on a decentralized space, so that consumers won't break the decentralization chain upon acquisition?

New problems require new solutions. We offer the Spheris Manager, a feature-extended crypto wallet that provides easy access to all your software licenses and subscriptions in one place, across all platforms, on (almost) all the devices you own. For filtering out malicious software, we will have a strong setup of filters, ranking algorithms, software screening techniques and the community's help. We will support multiple decentralized storage solutions, including integration with public IPFS blockchains and Ethereum's Swarm.

3. SPHERIS SOLUTION

3.1. DAM Architecture

3.1.1. Introduction to DAM

Definition: The Decentralized Application Marketplace, or DAM for short, is the combination of five separate, function-specific components that work together to form the whole of Spheris platform.

The components are:
1. *Catalog*: a database of registered developers and applications.
2. *Browser*: the DAM interface.
3. *Manager*: an enhanced crypto wallet for managing subscriptions and payments.
4. *Signal*: an anti-piracy subscription validator component.
5. *Storage*: a storage integration framework for fast and easy remote content distribution.

Figure 3.1: DAM Components
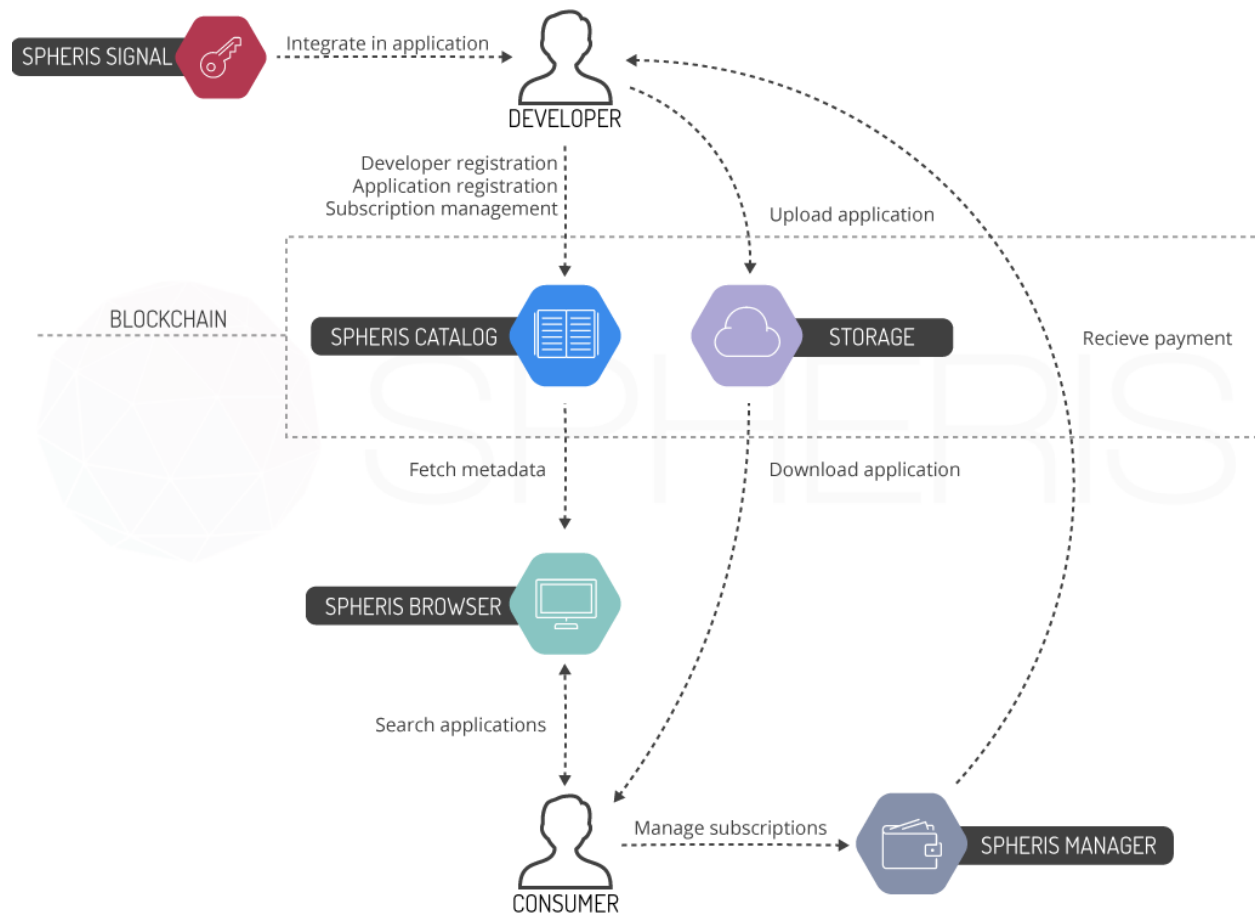
3.1.2. High-Level Overview

Figure 3.2: DAM high-level overview

Developer: registration of developer and the specific software is required in order to be added to the **Catalog**. Once software is registered, an app instance is created. Developer can craft custom subscription plans to be connected with his software. There's an option to upload the software to **Storage**, which is decentralized by default, and link the files from Storage to the app instance. A subscription validation library, which we call **Signal**, acts as another layer of security, making sure consumers use applications as intended by the developers.

Consumer: once an app instance is present in the Catalog, consumer may search and find it using our **Browser**, which is essentially the UI for Catalog. Browser fetches the necessary metadata from Catalog and relays it back to the consumer. Once consumer decides to purchase the software, payment in SPRS can be transferred via our **Manager**.

Subscription is then recorded in the blockchain, creating a unique ID which connects the Manager to the app instance. Proof of purchase is validated by Signal.

3.2. Solution Components

3.2.1. Catalog

Spheris Catalog is a registry that is stored on Ethereum's blockchain. Catalog maintains relevant information such as registered developers, applications, subscriptions and ratings. Data is written and retrieved by utilizing Smart Contract *methods* (functions that are executed on the Ethereum Virtual Machine).
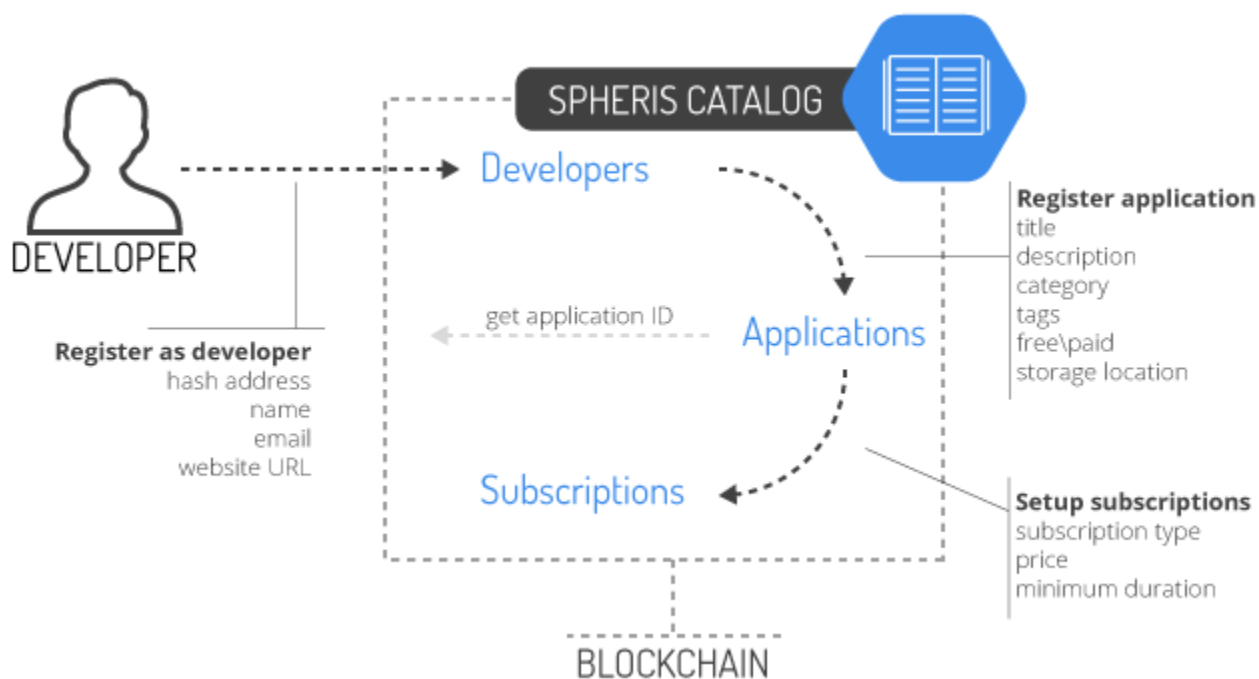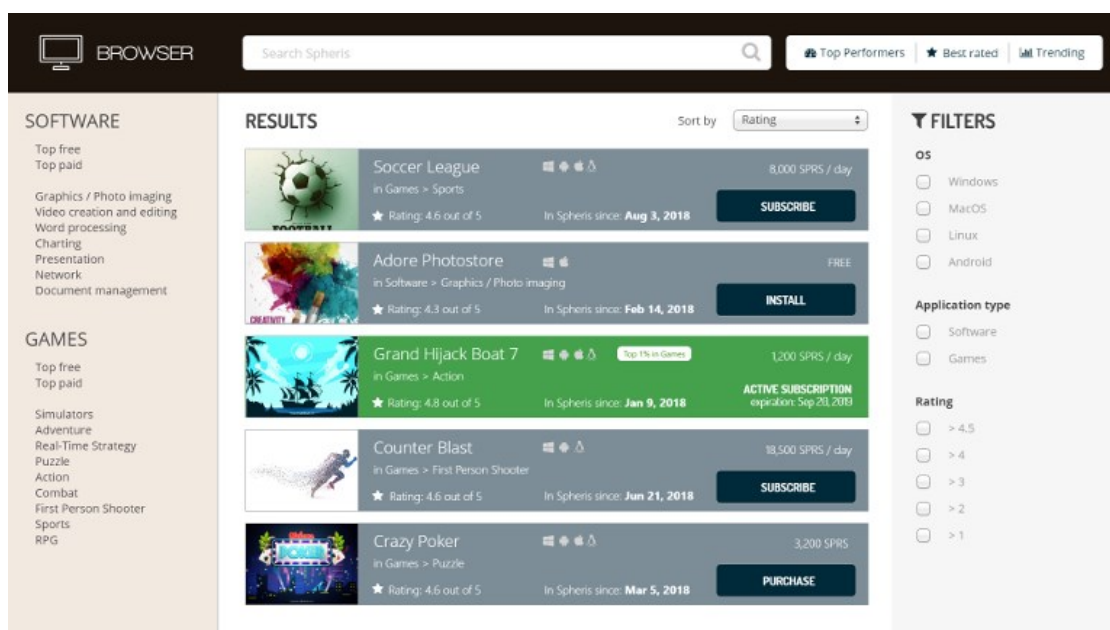

Figure 3.3: Interaction with Catalog

Catalog has numerous methods that developers can use in order to enhance their listings. Methods support promotional elements such as app thumbnail, images and videos. In addition, developers have a variety of customizable options: deciding on custom promotions with discounts, adding or changing subscription types (pay-per-day or pay-per-month for example), choosing between pricing their app in SPRS or in USD (rate in SPRS will be automatically calculated).

Use Case

1. A developer named Alice initiates dev_reg. Hash address is automatically retrieved from Alice's crypto wallet. Alice decides not to disclose her personal information, so she skips filling out her name, email and website. The only identifier connecting Alice to her app is the hash address, effectively making her anonymous.

2. Alice then initiates app_reg. She fills in the app name and description, chooses the appropriate category and tags, decides if her app would be offered for free, and selects desired storage solution (several options include decentralized storage).

3. Once this is done, an app instance is created in the Catalog. A unique ID is then sent to Alice.

4. Once Alice receives her app ID, subscription customization can be created for the app. Alice initiates sub_set. Subscription type can now be selected: one-time or subscription period. Alice chooses the *subscription period* type. *Minimum duration* field provides extra flexibility with how Alice wants to construct her subscription offering. For instance, Alice wants to provide consumers the option to use her app on a daily basis, that is, a pay-per-day scheme, so her input would be *1*. Alice decides to price her app in SPRS and inputs the price-per-day in SPRS.

5. This completes the registration phase. Additional methods become available for further customization, such as dev_page and app_page, which let Alice stylize her own developer page and app listing page elements, respectively. De-listing apps from being shown in Spheris Browser is also an option.

3.2.2. Browser

Spheris Browser is the DAM interface. It is a multi-layered visual representation of the Catalog registry; consumer layer for navigation, developer layer for application administration. The DAM interface will include popular app store usability elements, such as categorization, ability to search for apps and developers, filtering options, ratings and reviews.

Developers will have a broad range of tools in their dashboard to manage their apps and customize their app and personal developer pages.
Spheris Browser will be available as a web app, as well as on the following platforms: Windows | macOS | Linux | Android.
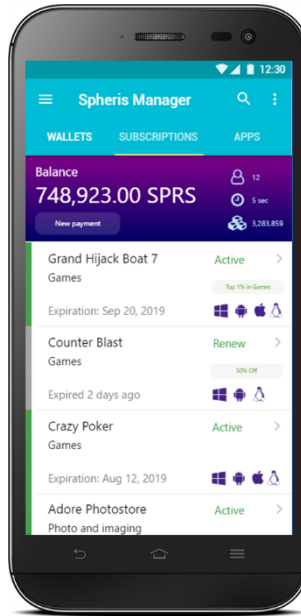
3.2.3. Manager

Figure 3.4: Interaction with Manager

Spheris Manager is a feature-extended crypto wallet which is designed to work with the Spheris platform, among other basic Ethereum operations. Manager is built from the ground-up with the goal to make it as simple and easy as possible for users. Aside from basic functionality that one can find in other wallet solutions, Manager also provides easy subscription and app management, as well as support for wish lists and watch lists. A convenient *notification system* will be put in place for users to get optional alerts on new apps released by a particular developer, relevant news and other promotional material.

For developers, Manager's UI can be used to interact with Catalog. This includes registering new apps into the system, adding new subscriptions and modifying app listing elements.

Full support for all ERC20 tokens.
Manager will be available on the following platforms: Windows | macOS | Linux | Android.

3.2.4. Signal

Spheris Signal is a subscription validation library. Developers can use this component as an additional security layer by making sure their app is being accessed with the private key that was used to purchase the subscription. Integrating Signal with applications is optional, but recommended, as it is a native anti-piracy solution which developers don't need to bother coding themselves.

Figure 3.5: Interaction with Signal

Signal libraries will be available on: Windows | macOS | Linux | Android.
We will provide web API for developers to use Signal without the need to implement this component in their application. Signal web API will be available for use in web applications as well.

Use Case

1. A developer named Bob wants to integrate Signal into his app. Bob prefers to add Signal code manually to his app. He downloads the Windows Signal library, because he programmed his app to work on Windows. Bob integrates Signal into his app by using provided API. Signal can now validate active subscriptions.
2. A consumer named Charlie downloads Bob's app from Spheris DAM. Charlie still hasn't paid for a subscription to use Bob's app, so when Charlie tries to run the app, Signal performs a quick subscription check. Signal finds no record of a subscription, therefore directs Charlie to his Manager (if installed) or to the Browser (if installed). If none of these components is installed, Signal directs Charlie to the web version of Browser in order to pay for the subscription.

3.2.5. Storage

Spheris Storage is an intermediary component that will allow developers to upload their applications to multiple storage locations. Popular centralized storage services such as Dropbox and Google Drive will be supported, as well as decentralized blockchain storage solutions such as Storj and Sia.

Multi-upload

We will work with native APIs to include numerous upload options in the same interface, so as to provide a pseudo-decentralized solution for developers who do not wish to upload their apps to a blockchain. Developers will be able to provide links to custom storage locations, such as their own website or a magnet link.

Decentralized Storage

We intend to support multiple blockchain-based storage projects, including *Storj*, *Sia* and *Filecoin*. Developers will be able to pay for decentralized storage using SPRS, which will then be automatically exchanged for relevant storage tokens (SJCX, for instance) to pay for the storage.

We are in the process of reviewing decentralized storage solutions which we intend to support. Support for Ethereum's Swarm will be provided once it will officially launch.

3.3. Spheris Official App Store

Spheris will operate the official Spheris App Store, which will be navigable through the Browser. We will be implementing the filters, algorithms and screenings necessary to keep illegal and malicious content out of the store experience.

3.4. Ranking System

Balancing the way apps will be represented in Spheris DAM is paramount to the whole experience. In order to solidify consumer trust in our DAM, we devised a weight-based ranking algorithm that will promote quality results to the top.

The ranking formula:

$$App\ Rank = \overbrace{\frac{\alpha_d A + \beta_d S_d + \gamma_d T_d}{m \sum_j^m \delta_j}}^{D_R} + \overbrace{\sum_i^N R_i(\alpha_c H_i + \beta_c S_i + \gamma_c T_i)}^{C_R}$$

Where D_R - the developer-side calculated rank weight, and C_R - the consumer-side calculated rank weight.

- D_R: A – App age. S_d – Number of active app subscriptions. T_d – Total number of app purchases. m – Number of previously released apps by developer. $\sum \delta_j$ – Sum of all previously released modified app ranks by same developer.
- C_R: H_i – consumer address age. S_i – Consumer's number of active subscriptions. T_i – Consumer's total number of app purchases. R_i – Consumer's app rating.
- $\alpha_d, \beta_d, \gamma_d$ and $\alpha_c, \beta_c, \gamma_c$ are fixed modifiers.

3.5. Spheris LaunchPad

One of the driving forces for a successful Spheris DAM is platform adoption by developers. Once our platform gains greater popularity, new developers will get exposed to the idea of decentralization and will start creating (or migrating) apps particularly with Spheris platform in mind. Accelerating the adoption rate would be beneficial for consumers, developers and early investors. That's where LaunchPad comes in.

Spheris LaunchPad is a program aimed at attracting new and established developers to the Spheris platform. We audit the apps and pay for the accepted ones. Monetary incentives such as initial payment will be extracted from the LaunchPad Fund, for which we secure 15% of the crowdsale. A successful crowdsale will directly affect the amount of funds we will be able to dedicate toward attracting developers, subsequently increasing our market value early on. Additional 11% of SPRS tokens will be reserved. The reserve will be locked for a period of 12 months, which is the estimated time until we hit our milestone of developing all four major components. This reserve will be used to replenish the LaunchPad Fund.

Once we roll out Catalog, developers will be able to use a large portion of Spheris's core functionality, making it an opportune time to kickstart LaunchPad. We plan to reach developers by:
- Dedicating resources to reach developers with established apps and offer direct financial incentives for apps that adopt SPRS payment.
  - Resources will also be allocated to provide support, making it as simple as possible to integrate Spheris into apps.
- Organizing Spheris-centric meetings, as well as attending and organizing conferences around the world, offering developers a chance to join the LaunchPad program.

We believe that the LaunchPad program is a necessary measure to boost general interest in the Spheris platform. The result would be a healthy and thriving market.

4. TOKEN MECHANISM

4.1. About SPRS Tokens

We introduce Spheris tokens (SPRS) as part of the Spheris solution. SPRS will be created once we deploy our smart contract on Ethereum blockchain. Spheris DAM is being built with the idea of creating a standardized currency for conducting software related business in a pseudo-frictionless[14] market environment.

- Token Name: Spheris Token (SPRS)
- Total Supply: 2 trillion SPRS (*2,000,000,000,000* SPRS)
- Token Standard: ERC20
- Total SPRS supply is final. No additional SPRS tokens will ever be created.

4.2. Total Supply Rationale

The decision to create 2 trillion SPRS tokens was made while considering several factors.

Given that SPRS tokens are meant to be used as the currency for buying/selling software, we want software price representations in SPRS to be convenient for worldwide markets. With a large number of distributed tokens, software prices can be conveniently represented as integers, avoiding fractions and conventions such as mBTC. For example, a software that sells for $20 is priced at 0.00719 BTC[15], which is arguably less favorable than 2,000 SPRS.

Market scalability is also a consideration. Taking into account that the Spheris platform will continuously attract new users, SPRS market price will rise to the point of disrupting software prices which are traditionally tied to a fiat currency index, unless scalability is taken into account. With such plentiful supply of SPRS tokens, we future-proof prices to a market cap of $2T without the need to utilize fractionalized prices, given 1 SPRS < $1.

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[14] Ethereum gas fees are mandatory, yet are comparably very small. Although there are no other fees involved, gas fees make the market "almost" frictionless.
[15] At the time of writing.

Another factor we have considered is that the higher number of outstanding SPRS tokens can result in greater liquidity for the SPRS token stock. This will facilitate trading and will narrow the bid-ask spread.

5. CROWDSALE

5.1. Details

- Total amount of SPRS tokens to be offered in crowdsale: 1,240,000,000,000 SPRS.
- Base rate: 1 ETH = 300,000 SPRS.
- Accepted currencies: Ether, Bitcoin.
- Hard cap: 3,000,000 USD.
- Refund policy: the minimum contribution total required is 720,000 USD. If minimum isn't reached at the end of the crowdsale period, contributors will receive a refund.
- Unsold SPRS tokens will be distributed proportionally between crowdsale contributors. In such a scenario, the amount of SPRS tokens of each contributor will rise, but contributors will hold a proportional amount of SPRS tokens according to their initial contribution. The grand total amount of SPRS tokens will not change, and will be fixed at 2,000,000,000,000 SPRS.

- Crowdsale duration: thirty days.
- SPRS tokens will be sent to contributors after the end of crowdsale period.

5.2. Structure

We are offering our crowdsale contributors three different attractive bonus layers:

1st Bonus Layer: Highest Contribution Bonus
Contributor with the highest contribution amount will receive 100% bonus.

2nd Bonus Layer: Up to 5 ETH, Timed Contribution Bonuses

	Period	SPRS received for 1 ETH contributed
1st week	Days 1 - 2	360,000
	Days 3 - 7	345,000
	2nd week	330,000
	3rd – 4th week	315,000

3rd Bonus Layer: Amount-Based Contribution Bonuses

Amount of Accumulated Contributions from Single Wallet		Bonus
5+ ETH	0.375+ BTC	30%
10+ ETH	0.75+ BTC	40%
25+ ETH	1.875+ BTC	50%
50+ ETH	3.75+ BTC	60%
100+ ETH	7.5+ BTC	70%

6. CASE STUDIES

6.1. App De-listed due to Questionable Reasons[16]

Bogdan is a developer who created Dash. It is a popular *API Documentation Browser and Code Snippet Manager* application. Bogdan chose Apple's App Store as his distribution platform. Unfortunately, his app got de-listed and his account was removed from the App Store, official reason being fraudulent conduct and App Store review manipulation. Contacting Apple affirmed their decision was final. Bogdan started distributing his app via his own website.

The community of Spheris users hold the power to decide on Bogdan's app ranking, should Bogdan choose to distribute his app with Spheris. App de-listing and account termination are not part of the Spheris platform.

6.2. App De-listed due to Conflict of Interests[17]

TubeMate is an app that allows users to watch and download Youtube videos. It is arguably against Google's interests for users to have the option to listen music via Youtube while their mobile screens are off, as well as having the option to download Youtube videos for offline viewing. TubeMate was de-listed from Google Play store, and other apps of similar nature are not allowed. TubeMate developer is trying to distribute their app privately online as a consequence, which leads to numerous fake and infected TubeMate app clones.

TubeMate's case would not have been an issue on the Spheris DAM, as apps will not be de-listed due to conflict of interests.

6.3. Age Restriction Hampers Business Opportunities

Matt is an underage developer, trying to publish his first app on Apple's App Store. He faces a problem: Apple requires Matt's credit card and legal credentials. Matt's options

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[16] https://blog.kapeli.com/apple-removed-dash-from-the-app-store
[17] https://steemit.com/app/@steembaby/top-practical-apps-banned-on-google-play-store

are limited in such a case, as he will have to opt to using one of his parents credentials and publish his app under his parent's name.

Matt could use Spheris instead, as there is no requirement to provide credit card or bank account information. Matt does not have to create a legal entity in order to conduct his business on the Spheris platform. Selling his app on Spheris, Matt will receive payment in SPRS tokens, which will allow him to liquidate on major crypto currency exchanges.
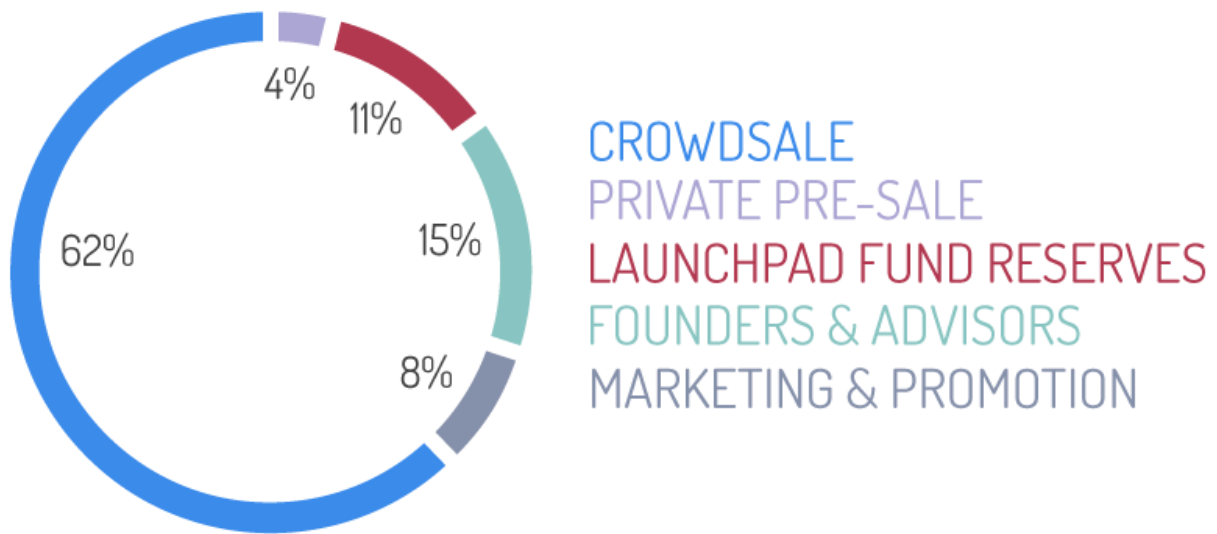
6.4. Restrictions Based on Location[18]

Digikala, an Iranian web ecommerce platform, was removed from the Apple App Store because the developers were located in Iran. Digikala would not have been discriminated against on the Spheris platform based on their location.

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[18] https://techcrunch.com/2017/01/29/apple-has-allegedly-begun-removing-iranian-ios-apps-from-the-app-store/

7. PROJECT BUDGET

7.1. SPRS Allocation

- 62% of total created SPRS will be allocated to the public **crowdsale**.
- 4% of SPRS will be allocated to early investors who participated in **our private pre-sale**.
- 11% of SPRS will be reserved for the **LaunchPad Fund**. The reserve will be locked for a period of 12 months, and will be used to support and attract new developers to the Spheris platform once unlocked.
- 15% of SPRS will be allocated to Spheris **founders and advisors**, with a 12 months period lock.
- 8% of SPRS will be allocated to **marketing** & promotional bounty campaign.

7.2. Funds Distribution

55% Development

Development costs include the development of main Spheris components, hiring top rate blockchain developers, UI/UX specialists and technical writers. Quality assurance of the code, security assessments of smart contract and other code base related tasks.
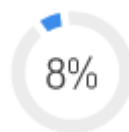
10% Reserves

Reserve funds will be used to deal with unexpected situations, such as additional over-budget legal expenses or other operational circumstances.

15% LaunchPad Fund

LaunchPad funds will be dedicated toward paying developers for app migrations, conferences, grants, as well as hackathons and competitions.
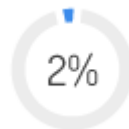
8% Operations

Operational costs include business development, accounting, hiring new talent, providing support, community relations, staff education and other administrative tasks.

10% Marketing

Marketing costs include promotion of Spheris operations, market outreach, and developer app distribution. Strong social media presence. Global and international marketing efforts, multilingual operations across the world.

2% Legal

Costs related to the establishment of Spheris as a foundation, legal advice, and compliance with relevant regulations in context of our market.

8. ROADMAP

2018	Q1	**Spheris Catalog** • Advanced architecture
	Q2	**Spheris Signal Alpha** Subscription validation alpha component is ready for testing and integration by the registered *phase-one* developers. **Spheris LaunchPad Program** The initiation of the LaunchPad, *phase-one* developers will receive their grants to finance integration and begin testing their software with Spheris's DAM components.
	Q3	**Spheris Manager Alpha** Spheris Manager alpha released, early adopters - both developers and consumers - will be able to experience the UI/UX of the wallet functionality together with fully graphical subscription management.
	Q4	**Spheris Signal** Subscription validation component is tested and we begin to add support for additional platforms. **Spheris Manager** • Manager is tested and ready for production, wide distribution begins. • Manager is available to all of the developers and consumers. • Legacy storage is implemented. • Collaboration with large blockchain storage begins. **Spheris Browser** • Marketplace is ready for production, listings, filtering, search and ranking algorithms in place. Wide adoption phase begins. • First Developers conferences.
2019	Q1	**Spheris Storage Alpha** • Initial Blockchain storage support is ready for alpha testing, registered phase one developers are notified. • Automatic storage payment using SPRS is ready for early testing.

* Roadmap will be adjusted according to the amount of contributions during crowdsale.