Algo

White Paper

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1. **Introduction**

The Coded Future

As the world market increasingly moves into the digital sphere, code is becoming the new *lingua franca* of the future. The language of computer software is the single-most important factor shaping the new digital world order, because source code is the language with which software developers are able to communicate and apply their unique technological solutions to common everyday problems.

And since code is a product of intellectual activity and has been globally recognized as intellectual property (IP) that is subject to copyright protection, it makes sense that developers should be able to benefit from the product of their labor and monetize their code.

However, with the many advantages that the new digital era is bringing, also come some problems, specifically in the field of copyright infringement. The Internet makes it easier than ever to reproduce and distribute original work. However, unlike traditional IP items, such as music or works of art, where authorship is easy to establish, authorship of code can be slightly more difficult to pinpoint.

Isn't Copyright Already Guaranteed?

Why would a developer want to establish provenance of their code? Isn't copyright already presumed once something original is produced? Technically yes, but in many courts of law, without the factual registration of an IP item, it can be virtually impossible to win a copyright infringement case.

This means that if a developer comes up with some code for a computer program, but does not register it with his national copyright office and then suddenly discovers that the code was copied and used by another developer who is now profiting from the idea, the original author will have a very hard time trying to legally prove that he in fact created the code. However, if he had taken the time to register his unique source code with the copyright office, he would have no difficulty proving his authorship, guaranteeing that he would

receive the monetary compensation he was due from the liable party who plagiarized his code.

However, this leads us to another issue. To register an original idea, the author must undertake a series of steps to deposit his work into the national registry, including submitting a fee. The process of copyright registration can even include physically mailing a copy of the work to the copyright office, which does not seem like too big of a deal if you are copyrighting a book, but becomes rather tedious for a developer, wishing to copyright their source code; especially considering that he must repeat the process if he makes any updates or revisions to his work. It can also sometimes take up to a year for an IP item to go through the entire copyright registration process.

This system of copyright registration is a relic from the past and as society moves forward into the digital age, becomes increasingly cumbersome, outdated and inconvenient to use. However, perhaps the reason it remains in place is because digital authentication of data and original authorship could potentially be subject to forgery as a tech-savvy hacker could easily manipulate data related to the provenance of the work.

The Blockchain Revolution

Fortunately, the relatively recent introduction of blockchain technology has revolutionized the way digital data is handled. What started as a public transaction ledger for cryptocurrency soon showed enormous potential for any sphere where the integrity and transparency of data proved to be important, because blockchain guarantees the immutability of data and protects it from potential attacks and tampering.

Consequentially, blockchain is quickly proving itself to be exactly the type of technology that can transform the field of copyright law and guarantee authors of original works, and specifically developers, their unalienable rights to monetize and protect their intellectual property from plagiarism.

2. Algo – A Brief Overview

Algo is a one-click solution for developers to secure code authorship via blockchain technologies. Algo was created by a group of developers who specialize in creating software

solutions for the automatization of IP rights management on the global market. Working in this field, the developers became aware that the solutions they were coming up with to protect works of original authorship, could also be applied to their own work – the very code that had created for the solutions.

With -Algo -, developers are now able to instantaneously deposit their unique code into a repository and record that fact using a blockchain network, thereby guaranteeing the data trail's immutability and the IP item's transparency of authorship.

Algo solves several problems for developers seeking copyright for their code.

First of all, it provides a simple solution for the quick deposit of code, an IP item, into a registry, thereby securing its copyright and all resulting benefits. It not only replaces an outdated model for copyright registration, but it also provides a more efficient and reliable method for copyrighting code. After all, technology is meant to make life simpler, not more complicated.

Secondly, the fact that all code deposits made with Algo are recorded with blockchain technology, guarantees that this data will forever remain available for the author to access. This solution provides a reliable alternative to private companies whose site can at any point of time be blocked or crash, which would mean the code and all of its accompanying data, such as its date and time of creation and author, would be left inaccessible.

Algo provides an invaluable resource for developers seeking to copyright their code. As technology becomes more advanced, talented developers will only grow in value. They deserve to be rewarded for their innovative solutions and Algo provides a reliable and fast option for developers to establish authorship over their unique pieces of code as well as tools to monetize their code.

3. Service Description

Algo was developed by developers for developers. That is why it is a convenient and simple solution to deposit code.

The Algo solution comes in the form of a plugin that can be downloaded from JetBrains and installed into a developer's preferred integrated development environment (IDE). From there, it is as easy as clicking a "Deposit" button to send code into a repository and having that instance recorded by blockchain technologies.

Alternatively, a user can access their Algo personal account and deposit code via Algo's web user interface.

The blockchain network is the backbone of the Algo project. Without it, Algo would just be another private repository for code, that would remain vulnerable to potential attacks and network failures.

However, Algo's reliance on blockchain and specifically its partnership with the IPChain blockchain-based infrastructure that specializes in recording instances of IP item registration, guarantees that the instance a developer deposits his unique code with Algo, it is forever recorded in a decentralized transaction network and that instance's data trail will remain immutable.

This is due to the way a blockchain network functions. A blockchain-based database relies on the collaboration of a network of contributors whose every input is time-stamped and then entered into a chain that is copied into each entry as it develops. Each contributor has an irreplaceable and uncopyable private 'key' that pairs with the chain to make any contribution or interaction verifiable and secure. If evidence is tampered with or changed, the associated hash value will not match, making it clear that a change has occurred.

This feature of Algo can prove to be the most useful for independent developers, who are interested in protecting their code against potential theft. If a developer discovers that his code has been plagiarized and seeks to gain monetary compensation, having the blockchain-secured data evidence of the fact of his depositing the code, will prove priceless in the litigation process. In the US, for example, without proof of an IP items' registration with the Copyright Office, a court will not consider the litigation case on copyright infringement.

The old saying that "an ounce of prevention is worth a pound of cure" is very true in this scenario. Any developer, it is probably safe to assume, has the habit of backing up his work while writing code, so why not backup authorship as well?

4. Usage Scenarios

I. Algo Plugin

1) To use the Algo plugin, you must first register at algo.id and set up a Personal Account.

2) Then, simply download the plugin from https://plugins.jetbrains.com/plugin/14749-algo

3) Next, install the plugin via your preferred IDE. For this example, we have used the IntelliJ IDEA IDE.
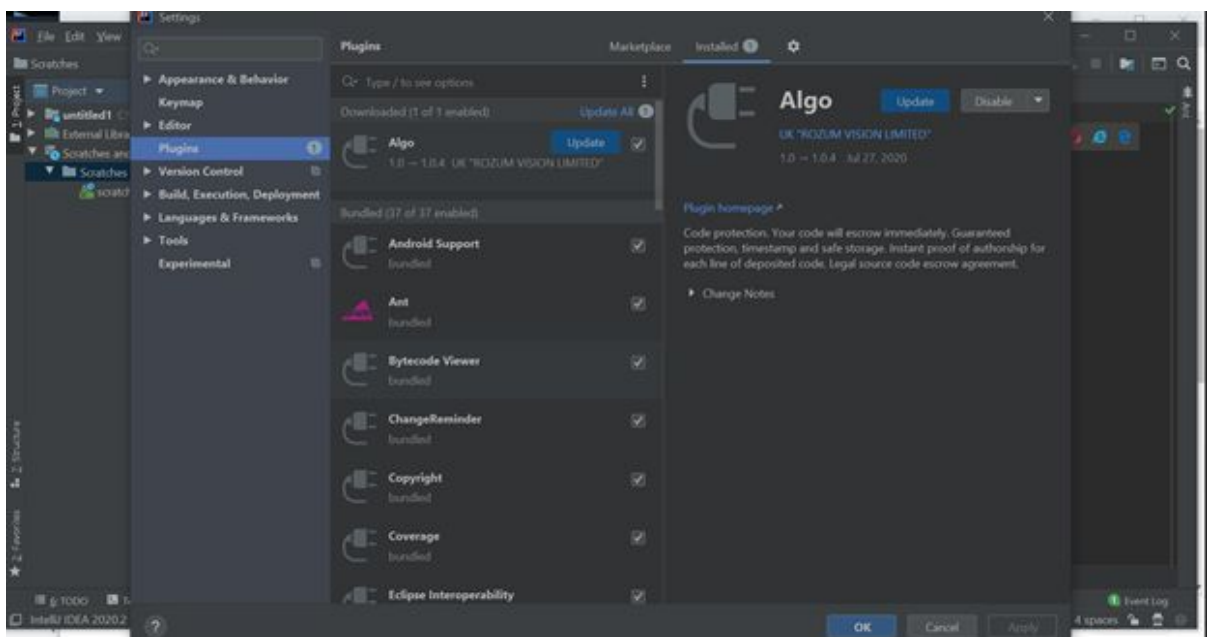
4) Once the Algo plugin is installed, it should appear in the menu bar. You can then proceed to write your code in whichever language you work in.

Once completed, highlight the code.
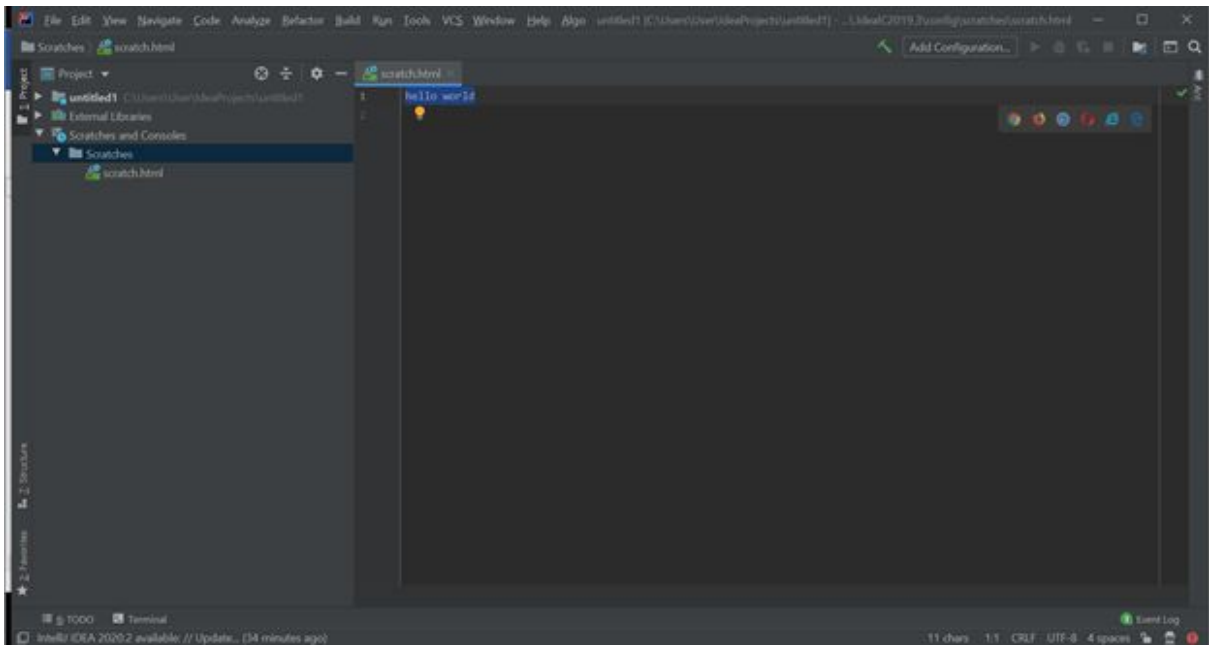
5) Next select the Algo tab from the menu bar and click Deposit.
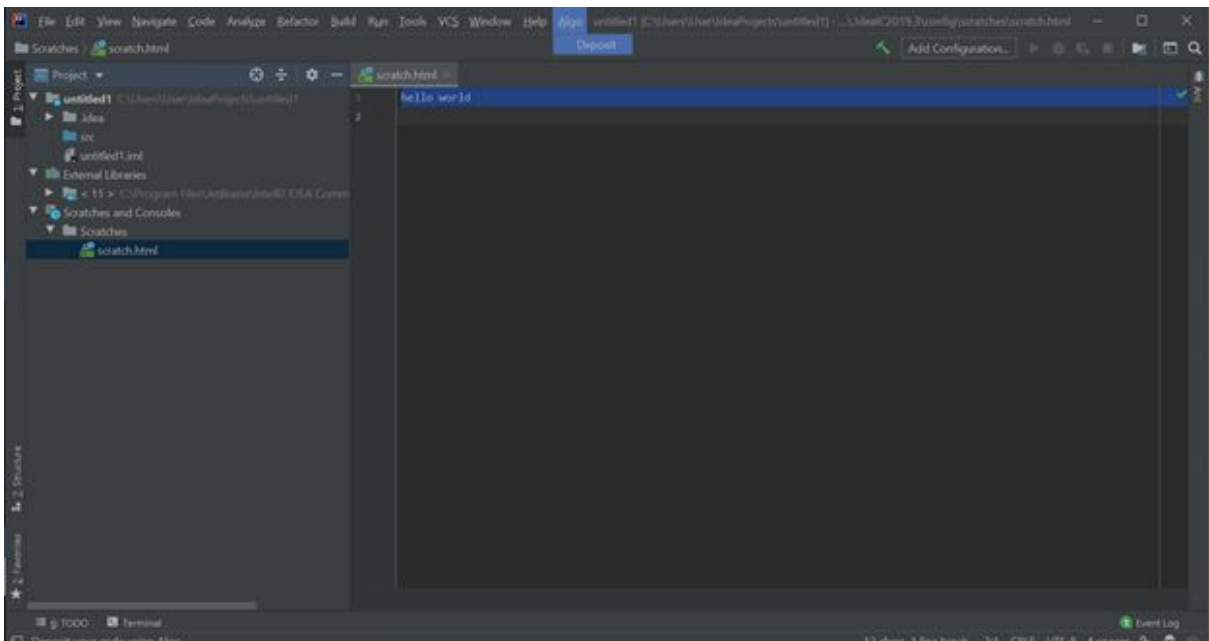
6) A pop-up window will then appear that will take you to your Algo personal account.
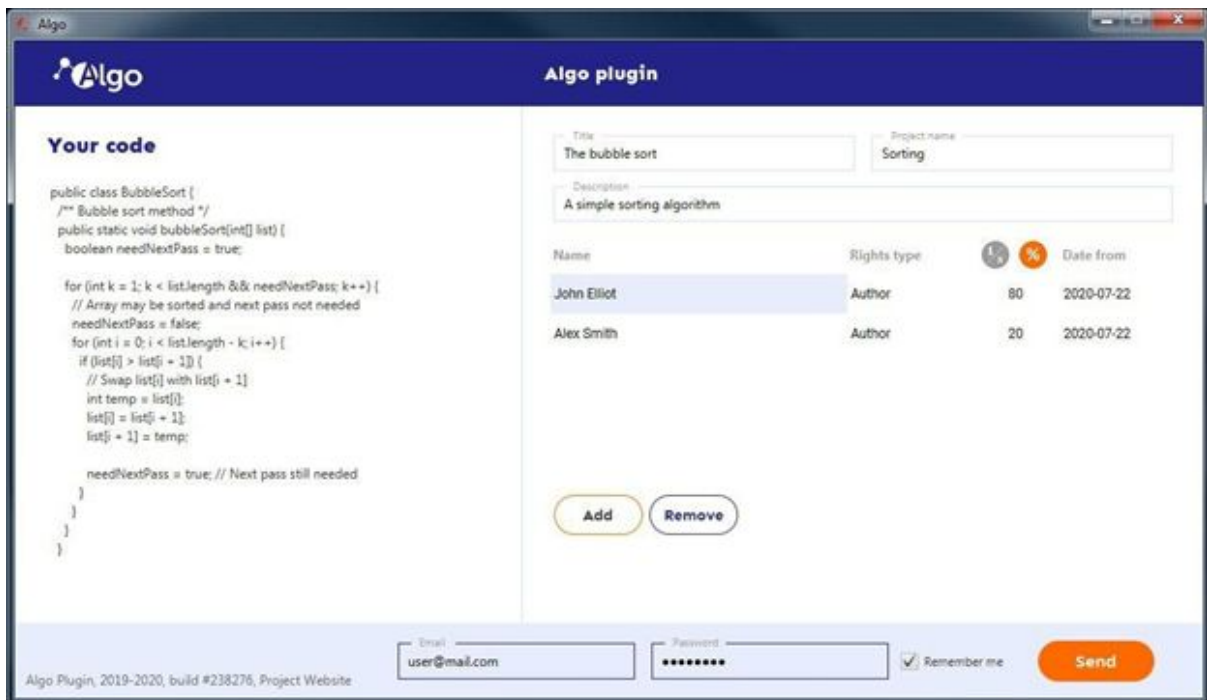
Here, you can check that your code has been uploaded in full, edit the code's title, project name and description and assign rightsholders.

7) Click Send to deposit your code. You will then get a confirmation window.
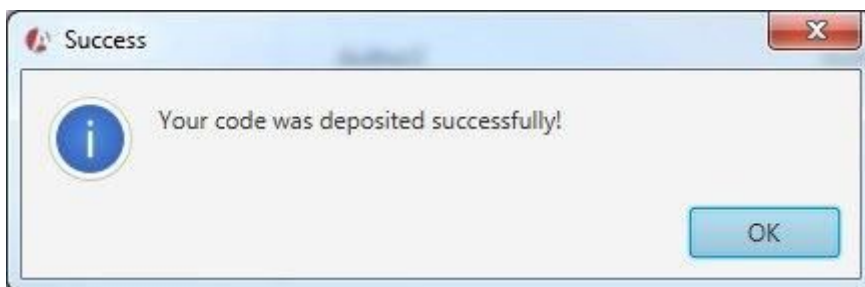
Once deposited, your code is stored in the Algo registry and the fact of its registration is recorded in the IPChain blockchain network.

II.   Algo Web User Interface

To view, manage and deposit code via Algo's web user interface, visit algo.id and login into your personal account.
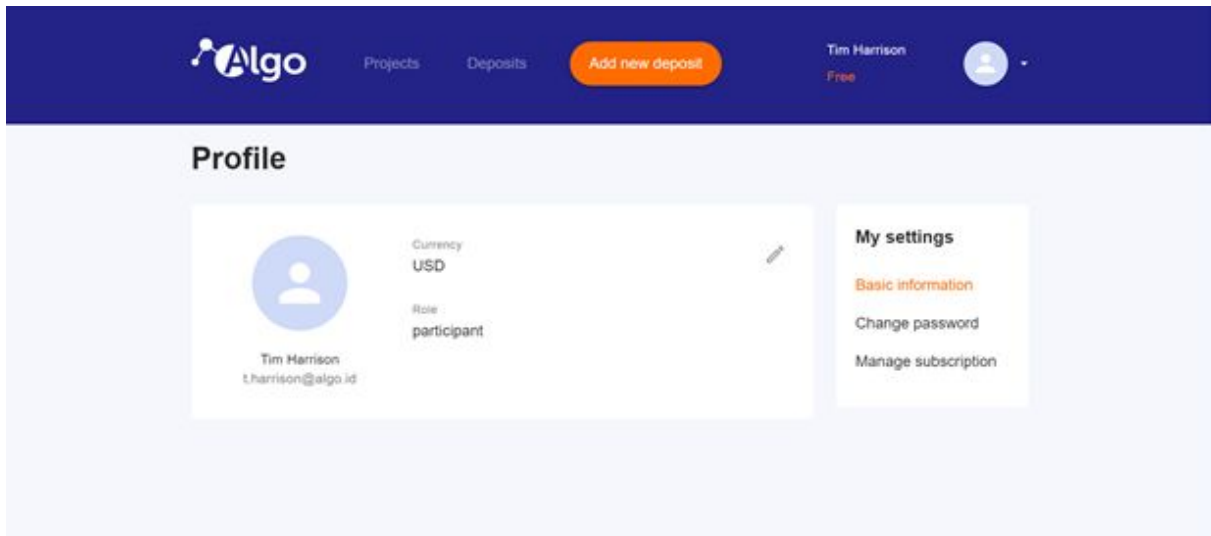
In your personal account, you can manage your deposits, subscription and change your password.

1) To deposit code, simply click the "Add new deposit" button from the top menu.
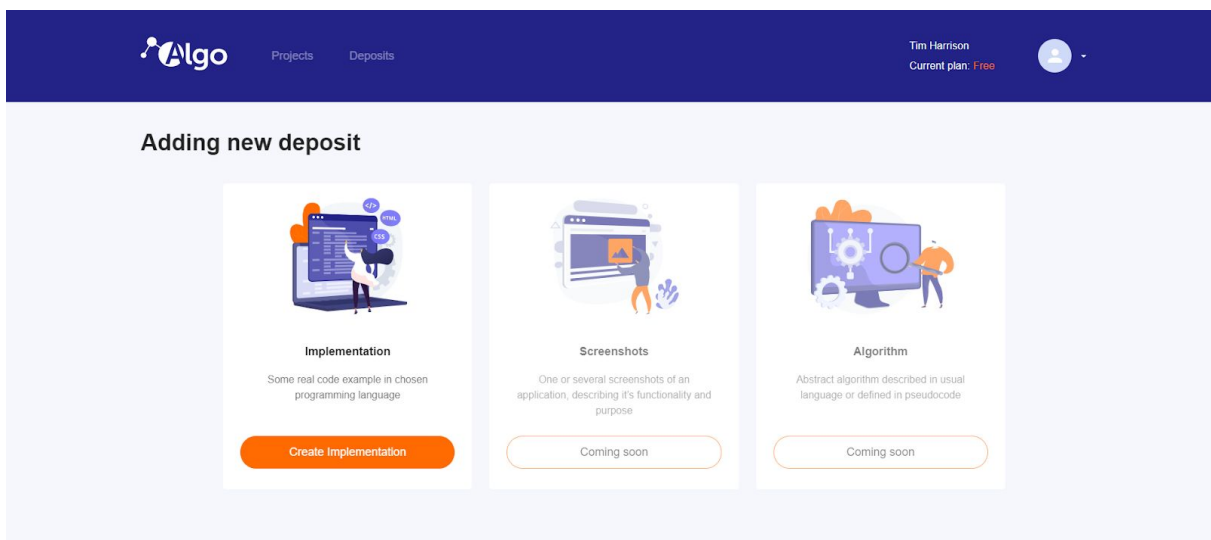
You will then have the option to deposit either code, a screenshot of your work (coming soon) or the description of an algorithm (coming soon).

2) Choose the Implementation option.

On this page, you can deposit your code, choose your editor color scheme, enter the title for the deposit and assign the code to an existing project or create a new one. You can also add the code's description and add other authors/participants to the deposited code.

Once all the information is entered, click "Create implementation" to deposit your code.

3) Your code is then sent to the draft section. From here, to register your code with IPChain, you must click the register button.
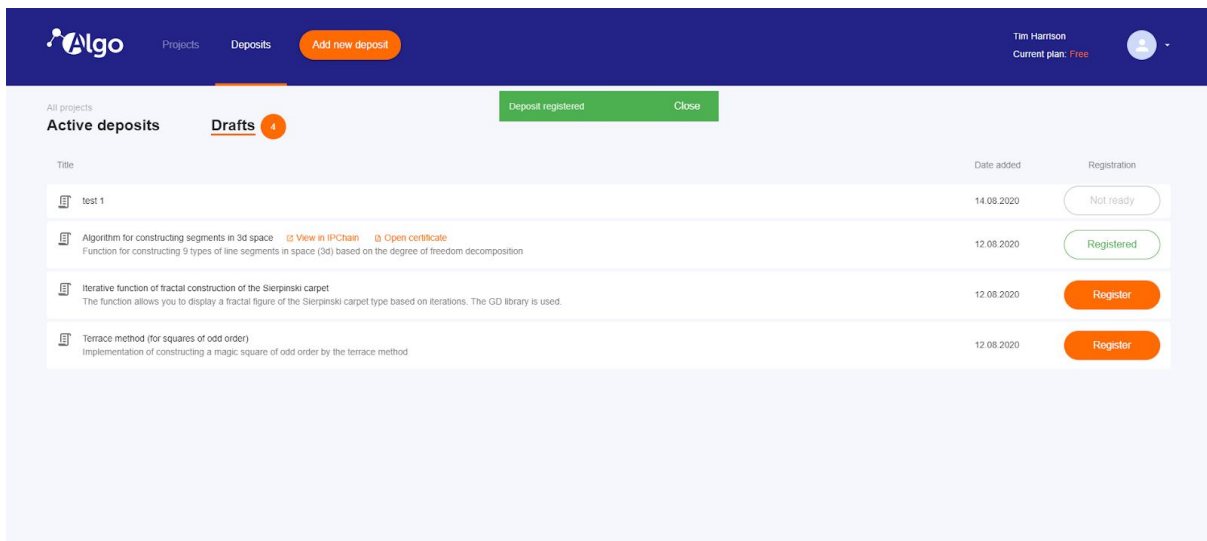
Once registered, you will see a "deposit registered" window.

If certain important information is missing from your code deposit, you will see a "Not ready" button in the registration tab. To register the code, please fill in the missing information.

4) From this page, you can also access all your "Active deposits".
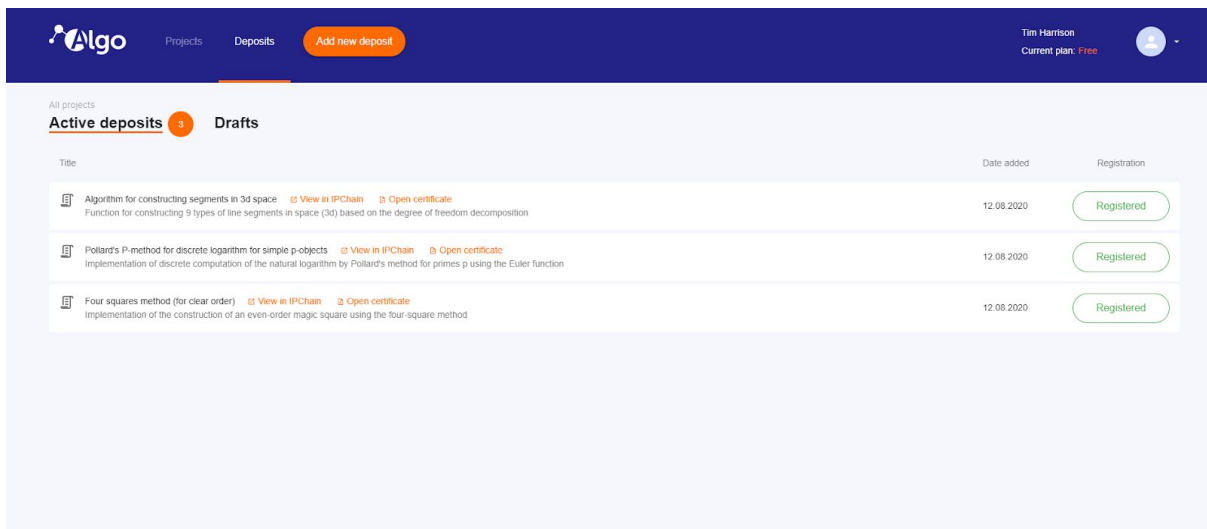
Here, for each title, you can view its

a) code

b) registered instance in IPChain

Name:

Algorithm for constructing segments in 3d space

Date of Registration in the IPChain System:

August 14, 2020

Parties involved in item creation

Right holder – Tim Harrison (50%)

Right holder – Zoe Foster (50%)

Author – Tim Harrison

Author – Zoe Foster

Creation Code

newly created item

Type

implementation

Description

Function for constructing 9 types of line segments in space (3d) based on the degree of freedom decomposition
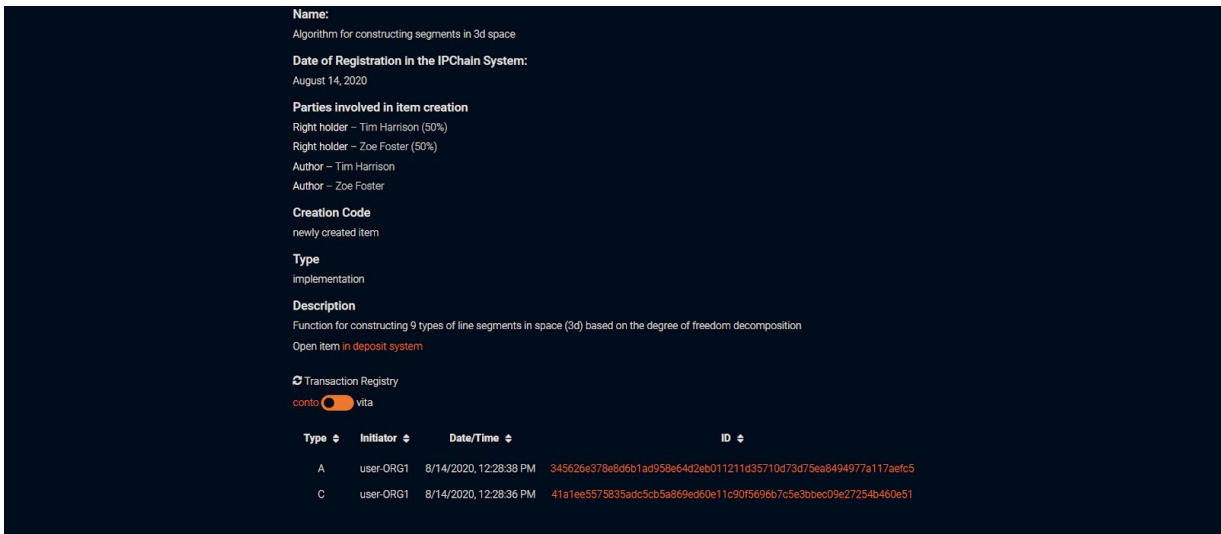
Open item in deposit system

↻ Transaction Registry
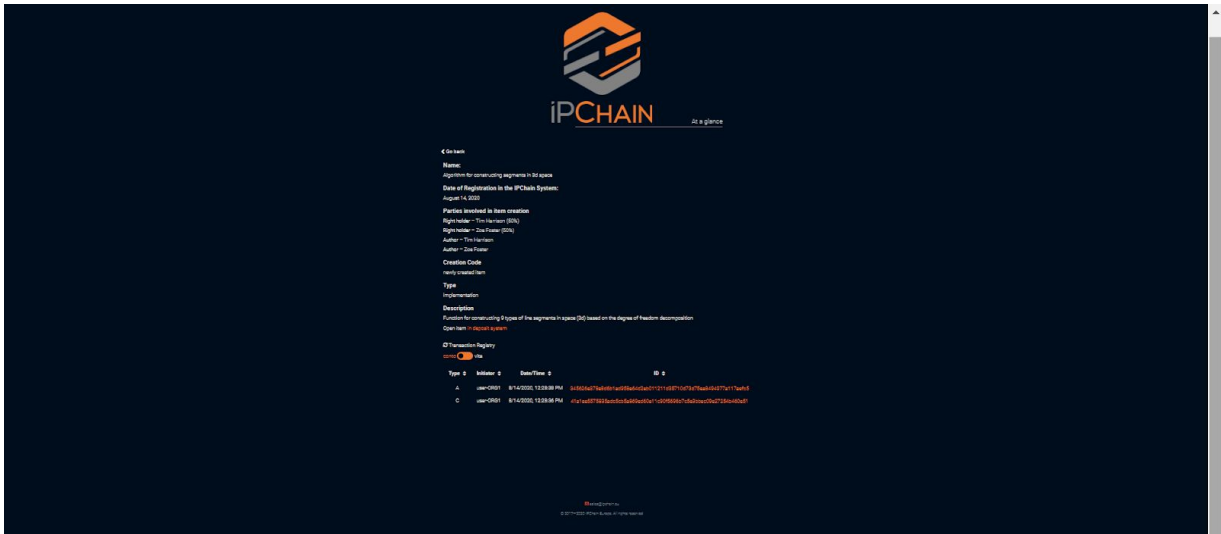
conto ⬤ vita

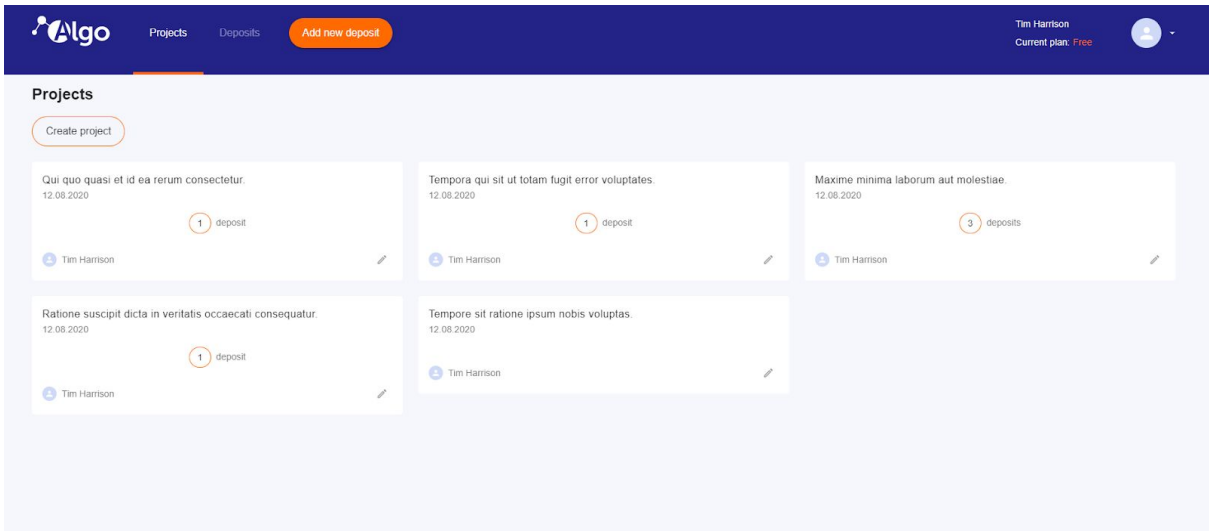| Type	Initiator	Date/Time	ID
A	user-ORG1	8/14/2020, 12:28:38 PM	345626e378e8d6b1ad958e64d2eb011211d35710d73d75ea8494977a117aefc5
C	user-ORG1	8/14/2020, 12:28:36 PM	41a1ee5575835adc5cb5a869ed60e11c90f5696b7c5e3bbec09e27254b460e51

c) the code's certificate of deposit

5) Finally, to manage your projects, go to the "Projects" tab.

Here you can create a new project or manage existing ones.

For each project you can see its title, its date of creation, its authors and how many

blockchain-registered code deposits it has.

5. Trials & Pricing

Algo offers a 30 day free trial period and three different price plans.

The Intro plan is intended for the developer who aims to deposit 30 pieces of code per month or less.

The Basic plan offers developers 300 deposits per month.

The Business plan is designed for high-output programmers or businesses that aim to deposit and copyright a large number of code per month. The price and amount of code deposits is determined on an individual basis following consultation with a sales manager.

6. Support & Contact

For any questions or concerns regarding the Algo product and service, feel free to contact us at support@algo.id

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