

METARINT

white paper



METARINT

METARINT IS AN ARTIFICIAL INTELLIGENCE
+METAVERSE+BLOCKCHAIN PLATFORM

Abstract

Metarint is a global, open-source AI (augmented reality) platform supported by the Ethereum blockchain.

Metarint enables users to interact with customized augmented reality in the real world with mobile devices or smart glasses.

Metarint can be defined as a new standard of augmented reality experience, positioned as the world's first browser that does not choose the content of users, but by the real world presenting the possible experience according to the specific geographical location.

Metarint using the concept of open source means that the entire Metarint community contributes to its growth, which also makes the entire platform independent of its founders and more sustainable.

Metarint uses the Ethereum blockchain to decentralize all token transactions between users.

Metarint land is stored in blockchain-based accounts, and the virtual land constitutes the digital layer that subdivides the earth into many hexagons.

Metarint land token is an irreplaceable token based on the ERC-721 standard, which allows decentralized ownership of digital assets, such as Metarint land or Metarint experience, to give life to AI augmented reality by using smart mobile devices or smart glasses.

By using the market, Metarint land can be freely traded between users in a decentralized way.

This means that the owner of the Metarint land can decide what kind of experience the user will experience after entering the Metarint land. So, the community has absolute control over the Metarint land and the Metarint experience.

The AI experience can integrate virtual content with the real world from static 3D content and highly complex interactions and super-real scenes, and users can physically interact with the world around them. So far, the systems to develop these experiences are mobile devices based on iOS and Android, and HoloKit project-based HoloLens, Magic Leap smart glasses, and AR low-cost headphones.

Metarint as a platform to support the hardware currently available in the market, software integration will support all the next generation hardware available in the market through software integration.

Therefore, the platform is a hardware-independent standard.

Metarint experience can be realized through Unity3D-based SDK, and community users can buy and sell experience within the platform.

Unity3D is one of the leading real-time 3D development environments on the market, and its versatility, decentralization, and management capabilities for cross-platform project compilation enable it to support mobile devices and smart glasses.

Metarint implements a decentralized AD system based on the publisher / advertiser principle, where Metarint owners can get Metarint token by inserting advertiser sponsored content into an augmented reality experience.

Metarint is unstoppable, because once implemented in the blockchain, no one can change the software rules, Metarint land content, or encrypt the token economy.

Catalogue

1. market outlook

1.1 Market Overview	05
1.2 Market opportunities	06

2. Emphasize the market demand

2.1 The End User-The Explorer of the Metarint world	07
2.2 Asset Investors-Collector of Metarint Land	08
2.3 The Digital Media Agency	08
2.4 For Advertisers- -Those who want to promote their own products or services	09
2.5 3D Digital artist-the builder of the Metarint experience	09

3. Metarint Main features

3.1 Metarint ecosystem	10
3.2 Metarint of the land	12
2.3 The Digital Media Agency	13
3.2.1 Why is the hexagon	14
3.2.2 Lateral adjacent	14



3.2.3 Distortion	13
3.2.4 Metarint Land Natural language URI	14
3.2.5 Private use level and public use level	14
3.3 Trading market	15
3.4 Metarint Land purchase, sale and lease	15
3.5 Metarint, Experience: purchase and sell	16
3.6 Metarint, Advertising: Purchase and sell	16

4. Metarint Technology

4.1 Augmented reality technology	17
4.2 Persistent AI AR experience and sharing experience	17
4.3 Metarint Geolocation and tracking	17
4.3.1 The GPS problems	17
4.3.2 New positioning technology-the fourth dimension	18
4.3.3 Locate the target and conduct the scan	20
4.3.4 Subsequent development	20

5. Token economy

5.1 Token issuance mechanism	21
------------------------------	----



5.2 token distribution mechanism	21
----------------------------------	----

6. Disclaimer

6.1 Disclaimer	22
----------------	----

6.2 Risk warning	22
------------------	----

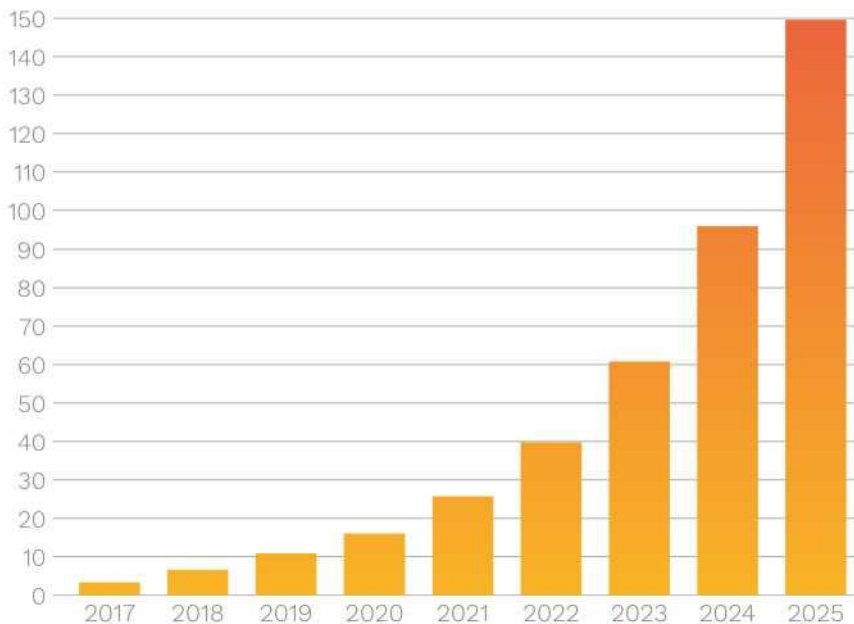


1. market outlook

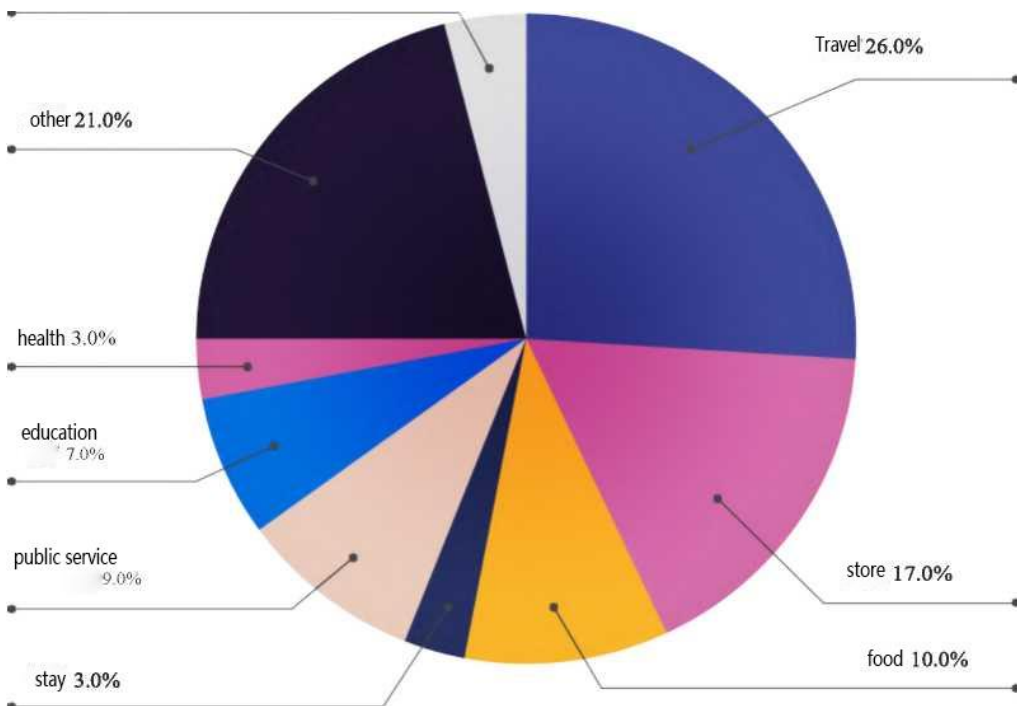
1.1 Market Overview

In 2017, several augmented reality technologies were introduced to the market. Tech giants such as Apple (AAPL), Facebook and Google have made large investments and acquisitions to increasingly use the technology in the consumer market.

The consumer sector will be the largest consumer in AI and VR, followed by retail, according to a recent forecast released by The International Data Corporation (IDC). This growth is also due to the direction of the smartphone market, with all devices produced since 2018 fully supporting AR augmented reality. In addition, the market related to smart glasses technology is growing rapidly, with many tech companies investing in a powerful, low-cost product. According to IDC, the augmented reality market will reach \$11 billion in 2020 and is expected to reach \$137 billion by the end of 2024. The research highlights that the investments of these major tech giants show how they understand the huge potential of AI not only as a technology but also as a new powerful communication pathway capable of conveying any type of content and can be used in any business area



Artificial intelligence benefits



Artificial intelligence technology use classification

1.2 Market opportunities

- After nearly two years of research and analysis, we have found the following problems that will be solved by the Metarint platform:
- Mobile device application software ecosystem fragmentation
- Attention drops in the digital ads
- The difficulty of monetizing digital assets
- AI augmented reality is a single experience in many vertical applications
- AI is only enhanced as simple markers, with low interactivity and engagement



2. Emphasize the market demand

Metarint Is an aggregator, a community that uses real economic systems that can revolutionize the mea-world-wide experience. Thanks to this system, Metarint offers solutions for different market segments.

Metarint The goal is to provide a single free augmented reality tool that gives you a 3D texture experience in your surroundings.

2.1 The End User-The Explorer of the Metarint world

requirement	Rx
A single world-wide AR augmented reality platform serves as a new 3 D browser	A single application installed in the smartphone / tablet / smart glasses that is compatible with all platforms on the market
A new advertising channel transcends the traditional overcrowded mobile advertising	The close combination of advertising and the AI experience makes promotions less intrusive and more attractive
Augmented reality experience that allows for multiple participants	Metarint Allows multiple users to interact in real time in the same location
Stable geopositioning experience, the integration of virtual and reality	Thanks to the introduction of software innovation, Metarint ensures the precise positioning of 3D elements in the real world, enabling a high quality user experience and alignment with its surroundings
Explore a new medium of open knowledge	Metarint Will be a seamless and quick pipeline to access Wikipedia and open street chart knowledge. Information will be transmitted through a superimposed pipeline, which is through an artificial intelligence virtual assistant



2.2 Asset Investors-Collector of Metarint Land

requirement	Rx
Create earnings from digital assets	Charge to publishers (advertisers) who wish to use their Metarint land for publishing content
Increase the value of the digital assets	In order to attract more tourists, the potential resale value of digital assets is added

2.3 Digital Media Agency

requirement	Rx
Brand-new communication channel	Metarint Provides a new pipeline for brand content delivery through worldwide augmented reality experiences
Technology provides them for the opportunity to attract customers' attention	The reality of AI is a rapidly growing trend that is being used by more and more brands. Metarint caters to this trend with its artistic high-quality AI experience
Customer experience of Internet geographic positioning	Metarint Content-based geographic positioning and content tracks in the augmented reality experience
New investment opportunities	When acquiring Metarint land, the agency can sponsor the experience in battle locations that the brand is interested in



2.4 For Advertisers- -brands that want to promote their products or services

Metarint Offers advertisers an opportunity for innovative and uncrowded new communication channels.

requirement	Rx
Innovative communication channels	The ads placed in Metarint combine a 3D experience to enhance the AD message
Uncrowded communication pathway	The Metarint platform was born without augmented reality standards, and it created a new, uncrowded communication channel
Advertising system with transparent prices	The decentralization of markets on the blockchain allows to manage supply and demand with maximum transparency and traceability

2.5 3D Digital artist-the builder of the Metarint experience

requirement	Rx
A global platform to sell AR AR experiences	Pathway distribution of worldwide AI reality and VR virtual reality content
The ability to receive new project requests	The Metarint market for the Metarint owners can be found
Advertising system with transparent prices	By becoming Metarint owners, 3D digital artists can insert advertisers' content and make money from their experience



3. Metarint Main features

The era of artificial intelligence is a new cryptocurrency in the field of meta-universe, which has now attracted great attention in the cryptocurrency industry. The project is based on the nature of the Pacific chain block and is supported by popular cryptocurrency exchanges, aiming to provide a unique experience for all users.

After purchasing an NFT-based avatar, the player can travel through a gorgeous virtual world called "Metarint". These avatars, called robots (Metarint), are key to unlocking all the functions of the Metarint, such as mining resources, owning land, and building physical objects.

By finding rare resources and completing tasks, players can generate a Metarint native token MENT.token MENT can also be obtained through pledge, in-game advertising, land sales and other pipelines.

The possibilities within the ecosystem are infinite, and many in the cryptocurrency community believe it is the best pipeline into cryptocurrency investment in the future.

3.1 Metarint ecosystem

-The Metarint table consists of the following parts:

Metarint Ecosystem

Metarint Land

ask price

Metarint Land: purchase, sale and lease

Metarint Experience: Buy and sell

Metarint Advertising: Buy and sell



Metarint Landowners

They use Metarint token to buy digital land (MENTland) and anchor artificial intelligence Can experience.



Metarint The Creator

They create a 3D digital experience (a Metarint experience)



Metarint Miners

They are the nodes of the Metarint



Metarint User

They have the Metarint experience



Metarint Advertiser

Use Metarint token to post AR advertising on Metarint land



Metarint Pledges

They pledge the Metarint token to vote for the IPFS Metarint node.



And 3.2 Metarint of the land

Metarint The ecosystem is supported by a hexagonal grid that covers the entire earth's surface. These hexagons are known as the Metarint lands, with a specific geographical location and a standard size of 300 square meters. The total number of Metarint land is 1.660.954.464.112. Each Metarint land can be further divided into seven hexagons, resulting in more precise positioning. Metarint Land is not only a reference system for artificial intelligence and VR content, but also a digital asset. It is also an economic incentive for our communities to grow and grow. Metarint Land will be purchased by the Metarint owner *, whose property will be awarded by an irreplaceable token (ERC-721 standard) recorded on the YB Square blockchain, which allows for decentralized and anti-reviewed property rights.

Metarint The ownership of the land will provide economic incentives to generate, distribute, and plan high-quality AI and VR content.

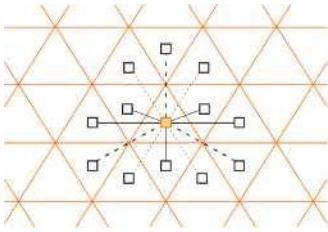
Metarint Land is a scarce and unique resource that can only be controlled by the private key of the Pacific address of Metarint Land NFT. In the case of a private key, control over the Metarint area will be lost forever. To prevent this, we require the owners of the Metarint land to perform any type of operation on the blockchain (either a simple ping function) at least once every three years to prove control of the private key. If the Metarint owner is unable to provide proof of private key ownership within 3 years, the Metarint land will be sold publicly again.

3.2.1 Why is the hexagon

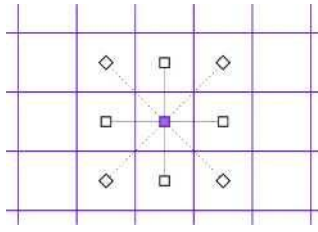
There are only three regular polygonal slopes that can be used to cover the earth's surface: the square, triangle, and hexagon. We chose the hexagon because it has two features that can combine well with the Metarint project:

3.2.2 Lateral adjacent

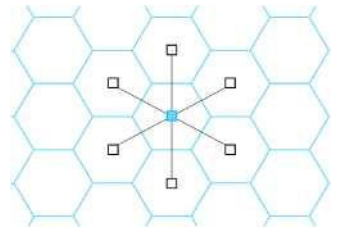
We envision that the opportunity for geometric interactions between multiple adjacent Metarint lands would have a huge impact on these relationships. Our goal is to multiply these interaction opportunities and keep them simple. The hexagon presents a very simple neighborhood distribution: the contacts are only on the side, never at the corner,



Triangles



Squares

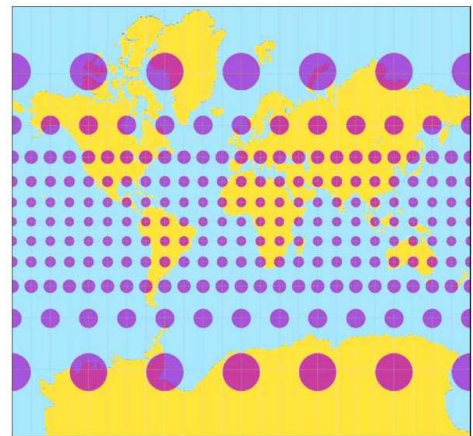
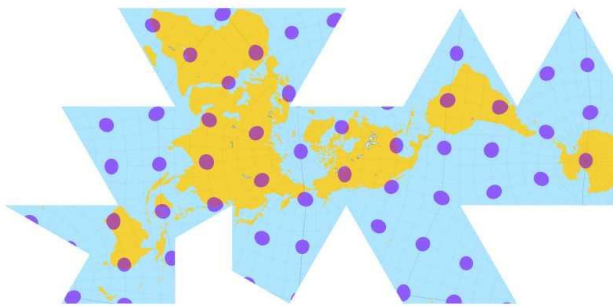


Hexagons

3.2.3 Distortion

Metarint Land covers the whole earth, we want all the real geographical coordinates and Metarint land. It sounds reasonable, but it's not all that easy! Projecting the Earth sphere onto a plane can deform the map, and in fact, most classic Earth map projection technologies, such as Mercator, make huge formations as we move to both poles.

Tiling the earth's surface with a hexagon can minimize distortion.



Dymaxion VS Mercator Tissot's deformation quota

3.2.4 Metarint Land Natural Language URI (Unified Resource Identification Word)

Humans have a special ability to deal with natural language, generally, a child can recognize and remember more than 5,000 words at the age of 4, and this digit grows to between 20,000 and 35.000 in adults. The same ability does not apply to the digits, and our cognitive functions cannot recognize and remember even dozens of digital sequences.

Metarint Land is defined by their geographical location, that is, a pair of latitude and longitude digits. To coincide with the above human cognitive abilities, we developed a calculation which would be open source to identify a pair of coordinates for each Metarint of land with a unique combination of triple English words (such as blue, sky, dream). Each of the 1660 trillion Metarint pieces of land will consist of a triple English word that is easy to remember. To achieve this result, we used a list of words selected by Google n-gram containing the 20,000 most commonly used English words.

3.2.5 Private use level and public use level

Metarint Land ownership is the foundation of the whole Metarint token economy. Metarint Owners are granted full control of the content of the Metarint land because it underpins the economic stimulus of our ecosystem. This space is defined as the private use level.

Metarint The goal is to become a decentralized platform for AI content. While establishing the private use level, we also need to create public and non-private content.

Some content has public utility, but cannot be created and managed by owners of a single Metarint land due to a lack of coordination between individual owners and a lack of adequate economic incentives. These public contents, such as: information on public buildings and services, infrastructure, and public institutions. For this reason, we decided to create a common use layer that would coexist on the same coordinates of the private use layer hexagon, but is not part of any entity.

The public use layer will also be the initiator of the Metarint platform, which we will populate with the entire Wikipedia geolocation knowledge base. The information will be delivered to the end user through AI overlay and the most advanced NLP technology trained on the Wikipedia Knowledge Base, and NLP training neural network will be managed by the Metarint block producer



3.3 Trading market

Metarint The market is decentralized and managed by smart contracts. Its main function is to promote the cross-matching between the supply and demand of digital assets on each Metarint platform.

All transactions are handled by the Metarint token, and smart contracts ensure decentralized asset transactions.

3.4 Metarint Land purchase, sale and lease

purchase

After the end of the initial offering of Metarint ("token"), Metarint land can be purchased in the Metarint market through an incremental price auction (Metarint with a starting price of \$10 equivalent to \$10). If a Metarint land has been purchased and sold on the market, it will be possible to purchase at the suggested price. Metarint The land meets the ERC-721 standards, and the token can also be peer-to-peer stored and sold on platforms outside of the Metarint platform.

For sale / lease

Metarint Owners can sell or lease their Metarint land on the market at any time. These Metarint lands will be sold or leased along with the Metarint experience.



3.5 Metarint, Experience: purchase and sell

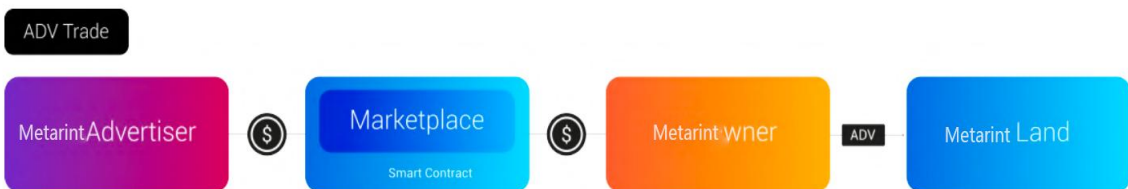
Community users can use Unity3D-based SDK Metarint to develop AI reality experiences and then decide whether to sell on the market. The asset is stored on the IPFS OVR node. The required amount is passed from the Metarint owner to the experience developer during the corresponding Metarint experience.



Metarint Land > Metarint Experience. Smart contracts guarantee the correctness of trading.

3.6 Metarint, Advertising: Purchase and sell

The SDK provides features that include objects needed to manage promotion projects, such as 3D virtual banners, or, in general, using drawings that dynamically assign textures so that advertisers can insert their promotion elements.



Metarint The starting price of the land may be adjusted according to the progress of the project



5. Metarint Technology

4.1 Augmented reality technology

Augmented reality is a technology that can stack all types of content (video, audio, 2D, 3D) in its surrounding environment. All of this happens in real time and all through any device with a monitor. This innovation actually "tracks" the elements in the real scene and adds other virtual elements. The combination of reality and digits creates a unique experience.

4.2 Persistent AI AR experience and sharing experience

For persistent AR, we refer to the possibility that the user repeatedly experiences the same AR in the surrounding environment. This is possible because of the first environmental scan for storage. This ability to reload the environment mapping allows the user to obtain a common experience and the user can see the virtual elements appearing in space with the same pipeline

4.3 Metarint Geolocation and tracking

4.3.1 The GPS problems

Metarint The goal of the app is to allow users to experience a variety of AI AR experiences based on their location. This, the application uses GPS device data to track the user's geography.

Data obtained from the GPS report geographic coordinates and relative accuracy levels. The values of these data cannot accurately locate the AI content. In addition, besides the measuring accuracy error, there is some uncertainty in this positioning. This may lead to the reception of abnormal data and deviate from the actual location. Aureality experiences relying solely on GPS anchored content are approximate, uncertain, and not stable enough.



4.3.2 New positioning technology-the fourth dimension

The first development stage focuses on matching the coordinates of the hexagonal Metarint land, and then develops a method to locate the content beyond the GPS limitations in augmented reality.

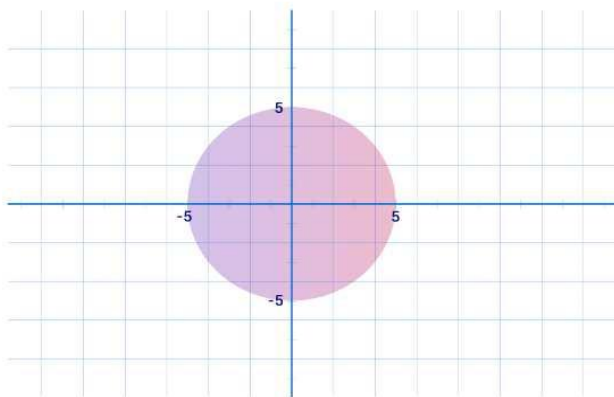
The logical concept is to integrate two localization techniques: SLAM with high local accuracy and global GPS, to identify similar data and eliminate abnormal data.

Thanks to the use of cameras, SLAM technology can identify key elements of the framework environment and create a three-dimensional point map. This map allows you to calculate the camera position with other physical objects around it. The conceptual innovation gave us an optimal result that SLAM technology made it possible to add a variable to GPS information, but this variable has so far been usable: time.

In fact, the system detects GPS data recorded at a particular point in time. Compare with the data scanned later. This can be done by examining the local localization data sent back by the SLAM technology.

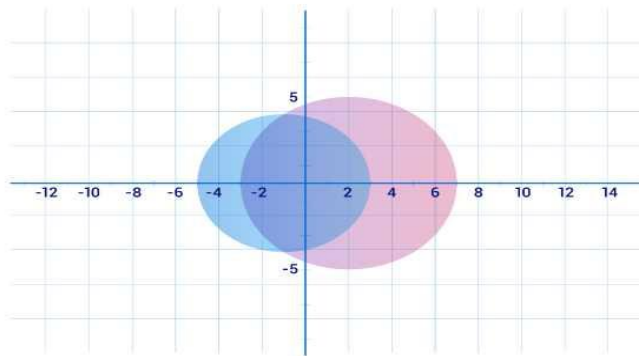
case

We assume that the user uses his device in a given geographical location. After GPS startup, the monitor frames the surroundings to identify two data blocks: the position of the geographic coordinates, and the position of the monitor relative to the framing environment. We assume that a latitude, longitude P and relative position to the surroundings are equal to the coordinates $x = 0$ and $y = 0$ (origin). The GPS reports a hypothetical 5-m accuracy benchmark.

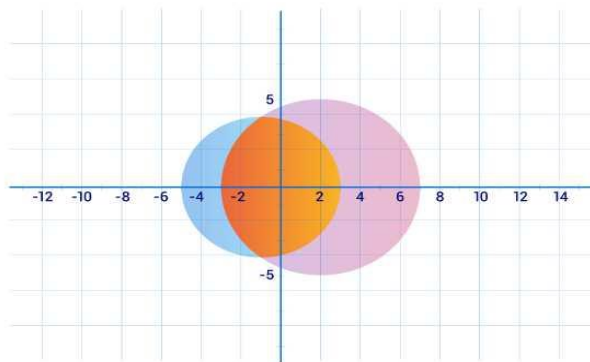


If the user moves 2 meters to the right, considering the accuracy of SLAM technology, the position coordinates changes to $x = 2$ and $y = 0$.

One expects GPS to record the same location, but due to its inaccuracy, it suggests 1 m displacement in the opposite direction with an accuracy of 4 m.



The purple area indicates the expected GPS data, and the blue area indicates the actual recorded data.



Analyzing them individually, it is impossible to know which of the two data shows the correct user coordinates, but by crossing the two data, we identified a more accurate region of uncertainty (orange region). Then the geolocation data is probably at the center of the intersection area. Calculating more than two recording moments can continuously improve the defined location provided by the GPS.



4.3.3 Locate the target and conduct the scan

This technology can better compensate for the imprecision of the GPS geolocation technology, without the need for external tools, technologies, or methodologies to help correctly locate virtual elements.

We have identified two possible technologies. The first involves the use of systematically identifiable graphical "targets". Given its size, location, and tendency to accuracy, "target" can provide the correct geographical coordinates for the device.

Suppose we are in a square with a long history, on the front side of a building, with a mural Or, in front of the door, in a mall with a logo. If previously uploaded to the system, the application was able to recognize these images, thanks to the use of computer vision computing (SIFT / SURF).

These technologies provide our tendency to build "target" images, thus providing positioning directions for the user thereafter. You can also calculate the exact distance between the target and the device (the user) by entering the Target image size. This yields the relative distance vector (offset). Adding the previously obtained information, namely the geographic location and tendency of the image, to the relative distance vector can easily calculate the precise geographic coordinates of the device.

Once these coordinates are available, SLAM can anchor content, and SLAM can position content with higher accuracy than the information provided by GPS.

The second way to identify a user's coordinates includes: scanning the scenic spots first by recording the points that the SLAM uses to anchor the content.

To use this technology, the Metarint land scanner needs to reach the physical location during the development phase and scan the surface that you want to display the experience through the Metarint application. The information collected (location and scanning points) provides a precise map of the environment in which the augmented reality content will appear.

4.3.4 Subsequent development

The new generation of GPS, GNSS, has emerged in the market and represents a possible way to enhance the use of Metarint. With the growing SLAM technology, the implementation of two-dimensional image recognition or 3 D models will improve the AI experience. On the other hand, the Bluetooth beacon can allow for accurate location identification, even where the GPS cannot provide accurate data, such as inside a building.

five. Token economy

5.1 Token issuance mechanism

Project name: Metarin

Token name: MENT

Total issuance: 1 billion pieces

5.2 token distribution mechanism

IDO: 20% (all output by market IDO, no locked warehouse, all released before launch;

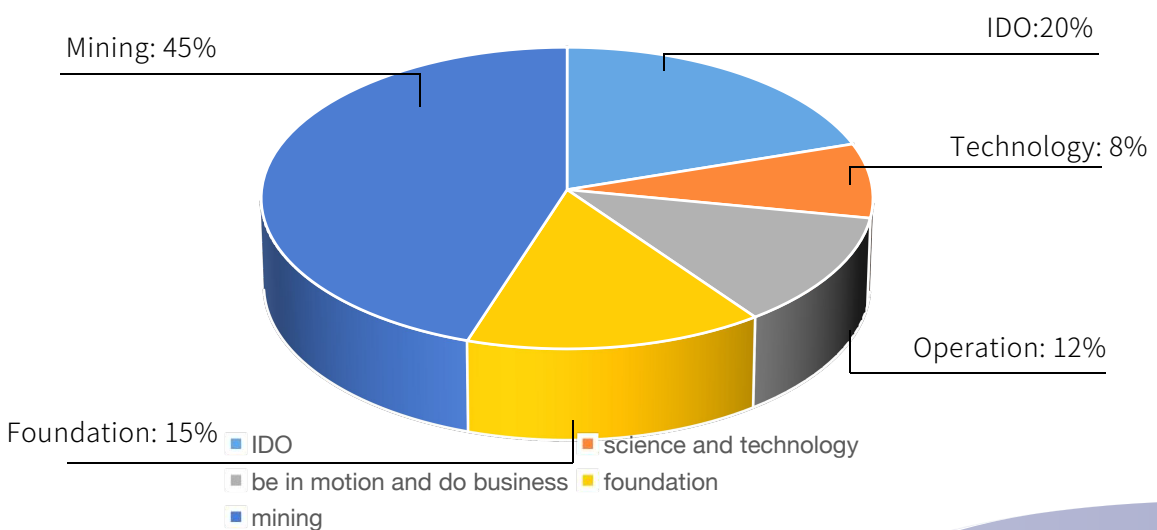
subscription: 100 million, first placement: 60 million second placement: 40 million)

Technology: 8% (lock up for 4 years, then 2% released every year until all released)

Operation: 12% (audited by the foundation and issued from time to time, the specific release ratio will be publicized in the community)

Foundation: 15% (locked up for 3 years, then released 1% quarterly, mainly for public relations processing and reward users and institutions that contribute to the platform)

Mining: 45% (mined from user data)



6. disclaimer

6.1 Disclaimer

This white paper is only used for the purpose of conveying information. The above information or analysis does not constitute an investment decision, and this file does not constitute any investment advice, investment intention or instigated investment. This White Paper does not constitute and should not be understood as providing any buying or selling or inviting securities in any contract or commitment; Metarin believes that there are numerous risks in the development, maintenance and operation of TARO and other cryptocurrency and blockchain systems, many of which are beyond the control of the Foundation. In addition to the other elements described in this white paper, each ADAO purchaser should also carefully read, understand, and carefully consider the following risks. The investor should identify the risks of TARO tokens, once participating in the investment will understand and accept the project risk, and be willing to personally bear all corresponding results or consequences; the Chain team shall not bear any direct or indirect asset loss caused by participation in the Chain project; each TARO purchaser should pay special attention to the fact that Metarin only exists in the network virtual space and does not have any tangible existence, which does not belong to or involve any specific country.

6.2 Risk warning

To participate in the purchase of TARO (i. e., digital asset exchange), please read the Metarin white paper carefully, have a comprehensive understanding of the technological characteristics of Metarin, the risk and return characteristics of green seeds, and make it clear that the Metarin project will not provide the return or selected cash of the exchanged digital assets under any circumstances. Metarin The team will make reasonable use of the digital assets raised by the tokens as disclosed in the white paper. Although the Metarin team works diligently and performs the obligations of the council, the buyers still have the risk of loss, including possible policy risks, economic cycle risks, liquidity risks, information security risks, and public welfare chain fluctuations, etc. Buyers should fully consider their own risk bearing ability, rational judgment and prudent decision.