# UMAY PROTOCOL

## WHITE PAPER

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## Abstract

Umay Protocol is a decentralized, EVM-compatible application that aims to improve video communication by addressing key challenges found in traditional platforms. These challenges include privacy and security concerns, censorship, dependency on financial intermediaries, and complications with payment processes. Umay Protocol is designed to meet these issues head-on.

Umay Protocol aims to offer a more efficient platform for both one-on-one and group interactions. It's suitable for a range of applications, from professional services to casual activities like online dating. Additionally, Umay Protocol enables users to monetize their expertise or services by setting their own rates for video calls, creating a dynamic ecosystem for income generation.

This whitepaper provides a comprehensive overview of the Umay Protocol, discussing the problems it addresses, the benefits it presents to users, its potential use cases, and how it operates. Further, it delves into the architecture of the protocol and presents our vision and future roadmap.

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# Introduction: What is Umay Protocol?

The world and the nature of work have been rapidly changing since the advent of the internet, and this transformation has accelerated even more in the wake of the Covid-19 pandemic. Today, a digital lifestyle is increasingly becoming the norm rather than the exception. It is characterized not only by practical elements such as remote work, online shopping, and the consumption of digital services, but also by casual engagements, including online entertainment and dating. As this digital realm expands, people are increasingly offering their skills and services online, leading to a significant rise in earning income from the digital space. However, this burgeoning trend is not without its challenges. Issues such as privacy and security concerns, payment complications, rigid and outdated regulations, and troublesome intermediaries are posing significant obstacles. These hurdles often deter potential remote workers and digital service providers, slowing down the momentum of this digital revolution.

Enter Umay Protocol. Umay Protocol is a decentralized video chat platform with built-in monetization functionality. It enables two individuals (and in later stages, any number of people) with crypto wallets to have a video call with each other. It differs from traditional video chat applications in two significant ways.

Firstly, it is decentralized. In Umay, decentralization has two dimensions. The first dimension is that video calls are peer-to-peer, which means video data doesn't pass through any central servers. This is made possible in part by the WebRTC technology and in part by the protocol's node network. Umay's node network consists of nodes that operate as a p2p network, like BitTorrent, rather than forming a blockchain and producing blocks. The node network performs essential services for the p2p video technology to function. The second dimension of decentralization is that protocol is operated by smart contracts on a blockchain. The aforementioned node network contributes to decentralization by supporting the smart contracts in off-chain operations such as DMs and user searches. Additionally, uploaded content, such as profile images and videos, is stored on a separate blockchain specializing in data storage. This purposeful architecture ensures that Umay is a fully decentralized platform.

Secondly, Umay enables users to generate income. Users of the protocol can set hourly rates to earn money from taking video calls. The fee is paid by the person making the call (i.e., call maker or caller) to the person that takes the call (i.e., call taker or callee) and is calculated by the hourly rate and the duration of the call. Protocol's smart contracts ensure that the transfer of funds are trustless and instant, and the amount is accurate. Calls can be initiated directly if the wallet address of the other person is known. Otherwise, a user can search for other users using certain criteria, and call any of those with fitting criteria who appear in the search results.

A minor portion of the generated fees is transferred to the token stakers and the node operators as rewards for powering the protocol. Another small portion is allocated to the protocol's treasury.

In addition to those two features described above, Umay has another unique aspect, which requires users to mint protocol NFTs in order to gain access to the platform. Protocol NFTs are untransferable, and thus using a new account requires a new NFT to be minted. This is a measure against creating multiple accounts to abuse the users and the protocol.

Beyond one-on-one interactions, the protocol aims to facilitate larger group communications. This will include the capacity for classroom-style trainings or webinars, thus widening the scope of use cases, particularly in educational and professional environments.

Initially adopting a multi-chain approach, Umay will operate on multiple blockchains, enhancing user reach and choice. Over time, Umay aims to introduce cross-chain functionality, allowing seamless interactions between users on different blockchains, breaking down barriers and creating a truly interconnected experience.

## Financial Model

The financial model of the Umay Protocol revolves around the platform facilitating calls between users and receiving a cut from the payments made during these calls. Here's a breakdown of the financial model:

1. Call Payments: When users participate in calls, the call makers pay the call takers for the services exchanged during the call. These payments are made using stable coins.

2. Protocol Revenue: Umay Protocol generates revenue by taking a percentage cut from each call payment made on the platform. This revenue serves as the primary financial source for the protocol.

3. Distribution of Revenue: The revenue generated from the protocol is distributed among various stakeholders within the Umay ecosystem, including the treasury, $UMAY token stakers, and node operators. The distribution is as follows:

   a. Treasury: A portion of the revenue goes to the protocol's treasury. These funds are to be used for various purposes, such as platform development, marketing, legal compliance, and other operational expenses. Once the DAO governance

model is implemented, the allocation and use of treasury funds will be determined by the $UMAY token holders through proposals and voting.

b. $UMAY Token Stakers: Another portion of the revenue is distributed among the stakers of the native $UMAY token. This incentivizes users to hold and stake the token, contributing to the platform's security and stability. By staking $UMAY tokens, users can earn a share of the platform's revenue, creating a passive income stream.

c. Node Operators: The remaining portion of the revenue is allocated to the node operators, who are responsible for maintaining the platform's infrastructure and ensuring its performance, security, and availability. Node operators are required to stake $UMAY tokens as a Service Level Agreement (SLA) guarantee, which can be slashed if they fail to meet the necessary standards.

d. Domain Owners: A share of the revenue is also allocated to the domain owners, who initiate new domains and manage communities, creating front-end applications integrated with the Umay Protocol.

This financial model enables the Umay Protocol to generate revenue from its core services while incentivizing users, stakers, and node operators to actively participate in and contribute to the platform's growth and success.

## Areas of Use

Umay Protocol is set to be an open-source project, which means that its source code will be freely available and usable by anyone. This will allow developers to build their own community / video chat applications on top of the infrastructure it provides. This makes it a versatile and flexible solution that can be customized to fit a variety of use cases and user needs.

Umay Protocol's default front-end is highly customizable, allowing modifications through its configuration file to suit various domains, effectively serving as a general-purpose video chat application. In addition to this adaptability, the protocol encourages third parties to develop specialized front-ends. These third-party customizations can address specific needs across diverse sectors, such as

- Dating
- Foreign language teaching & other tutoring
- Skills development
- Medical consulting & therapy
- Business consulting
- Wellness & fitness consulting

- Life & career coaching
- Legal consulting
- Crypto & forex trading consulting

The aforementioned examples serve as an indication of the diverse range of possibilities, but they are by no means exhaustive.

While the Umay Protocol team will develop some of these custom front-end apps, they also encourage third-party developers to create their own. These third-party developers will receive incentives for operating domains on the platform.

# Multi-Domain Implementation

Umay adopted a multi-domain approach (like a domain for crypto enthusiasts, another for people who want to date) instead of a single-domain one for several reasons that provide both practical and strategic benefits for the platform and its users. Here are some key reasons for choosing a multi-domain approach:

## Decentralization and Resilience

Having multiple domains ensures that the platform's infrastructure is more decentralized and resilient to potential attacks or censorship. If one domain faces issues or is taken down, the other domains can continue to operate, ensuring uninterrupted service for users.

## Flexibility and Scalability

A multi-domain approach allows Umay to create and manage different domains tailored to specific user segments or market needs. This flexibility enables the platform to cater to diverse user preferences, adapt to changing market conditions, and scale more effectively as the user base grows.

## Compliance and Legal Considerations

Operating across multiple domains allows Umay to navigate and comply with various legal and regulatory frameworks more effectively. If a specific domain encounters regulatory challenges or restrictions, the other domains can continue to operate without being affected by those constraints.

## Enhanced User Experience

By providing a variety of domains, Umay can offer users a more personalized and engaging experience. Users can choose a domain that best suits their preferences, needs, and comfort levels, leading to higher satisfaction and retention.

### Mitigating Inappropriate Content

A multi-domain approach helps address the issue of potentially offensive or inappropriate content. By creating separate domains catering to different user segments, Umay can minimize the exposure of users to content that may not align with their values or preferences.

### Focused marketing and growth

Umay incentivizes third parties to establish new domains and build up communities by offering rewards for their contributions. This strategy allows Umay to concentrate its marketing efforts on attracting and retaining users within each specific niche, promoting growth within each domain. Additionally, it motivates domain starters and community owners to actively participate in the platform's expansion and success.

Overall, the multi-domain approach offers several advantages that contribute to the platform's long-term growth, sustainability, and user satisfaction. It helps Umay to maintain its decentralized nature while providing a flexible, resilient, and user-friendly environment.

## Benefits for Users

There are compelling reasons for individuals to use a decentralized video chat protocol, specifically Umay. Some of the main ones include the following:

### Trustless pay-as-you-go payments

One of the major pain points that plague both the providers of real-time services and their customers is payments.

Firstly, there's the issue of timing. When the customer pays before the service is completely rendered, they run the risk of not receiving the full service they paid for. Moreover, prepayment may necessitate a secondary payment for final settlement, further complicating the process. On the other hand, the service provider is at risk if they agree to be paid after delivering the full service, as the customer may not fulfill their payment obligations.

Secondly, there's the challenge with determining the correct amount of payment. This can be complicated by factors such as varying rates, the duration of the service, and any additional charges that might be incurred.

Umay Protocol addresses these challenges through the use of its smart contracts, which act as an escrow and handle the payment process. This ensures that the caller pays and

the callee receives the exact amount based on the callee's hourly fee and the duration of the call. In doing so, Umay Protocol eliminates the trust issues and potential disputes that can arise in traditional payment models.

## Censorship-resistance

Censorship-resistance is a key feature of the Umay Protocol, as all user data is managed by smart contracts on the blockchain, making it impossible to censor or restrict activities such as creating a profile, viewing other users' profiles, and making searches. Furthermore, the peer-to-peer nature of the protocol ensures that video calls cannot be restrained or censored, as there are no central servers that can be targeted or shut down. Therefore, Umay provides users with a censorship-resistant platform for engaging in video chats and other activities without fear of interference or censorship.

## Privacy

An important reason that motivates users to favor decentralized apps over centralized solutions is privacy, as data stored in or transmitted through a centralized platform cannot be trusted to be completely private. In contrast, Umay Protocol is a decentralized app that prioritizes privacy and offers users a secure and private platform for video chats and other activities.

The data handled by the Protocol can be divided into three categories. These categories and the degree of privacy each one is handled with are explained below:

### User profile data

User profile data is stored on the blockchain and is therefore publicly available, but users are not required to provide any personal data that could identify them. Any user with just a wallet address can use the protocol without any limitations.

### Searches

Searches conducted by users are not stored in any way, ensuring that user search history is completely private.

### Video calls

Video calls are peer-to-peer and completely private between the two parties involved, ensuring that conversations cannot be intercepted or eavesdropped upon by third parties.

## Absence of financial intermediaries

In any centralized application involving financial transactions, financial intermediaries are required to transfer funds between parties. The implications of this are multifaceted and often disadvantageous.

First, intermediaries typically impose commission charges that can be significant. Second, the transaction process generates financial records, necessitating both the sender and the recipient to undergo Know Your Customer (KYC) procedures. This not only compromises privacy but also creates bureaucratic complexities. Third, the transfer can take considerable time, particularly for cross-border transactions, due to regulatory requirements; in some cases, these transactions can even fail. Moreover, banks and even innovative financial startups can exercise unilateral control over accounts. They can disable accounts or freeze funds at their discretion, causing distress and financial uncertainty for the account owners.

A decentralized solution such as Umay Protocol circumvents these issues. With Umay, there are no intermediaries, no need for KYC procedures and their accompanying records, and transactions are finalized rapidly — in a matter of minutes if not seconds. This all contributes to a more streamlined, autonomous, and user-friendly experience for service providers and users alike.

## The Need for a Decentralized Approach

As outlined in the previous section, the Umay Protocol's business model relies heavily on ensuring privacy, censorship resistance, the absence of financial intermediaries, and secure, trustless, fair payments. Traditional centralized video platforms are unable to fulfill these critical requirements, rendering them unsuitable for Umay's vision.

In order to create a sustainable and thriving ecosystem, it was essential for the Umay team to develop a decentralized app built on blockchain technology. By choosing this path, we ensure that the platform can deliver on its promise of a secure, private, and financially autonomous experience for its users, avoiding the pitfalls and limitations of centralized video platforms.

## Multi-Chain & Cross-Chain Approaches

In the world of decentralized apps, multi-chain and cross-chain are key ideas that help make platforms like Umay Protocol more accessible, functional, and widespread. Umay Protocol uses these approaches to build a strong and flexible video chat service that operates on different blockchain networks.

## Multi-Chain Approach

The multi-chain approach for Umay Protocol refers to the deployment of its smart contracts and services across multiple blockchain networks. Each blockchain operates independently, hosting a version of the Umay Protocol that functions within the specific parameters and capabilities of that chain. This strategy allows Umay Protocol to:

- Leverage the distinct advantages of each blockchain, such as speed, cost, security, and community engagement.
- Increase resilience by not relying on a single blockchain, thus mitigating risks related to network congestion, high transaction fees, or potential downtimes.
- Expand the user base by tapping into the diverse communities and ecosystems associated with different blockchains.
- Provide users with the flexibility to choose a blockchain that best suits their preferences or existing crypto holdings.

In the multi-chain context, while users on different blockchains can view each other's profiles and availability, initiating and conducting video calls require both parties to be on the same blockchain to ensure transactional coherence and security.

## Cross-Chain Approach

Cross-chain functionality represents the next evolutionary step for Umay Protocol, aiming to enable seamless interaction between users across different blockchain networks. Cross-chain technology allows for the transfer of information and value between disparate blockchain systems, enabling a more interconnected and fluid decentralized ecosystem. For Umay Protocol, this means:

- Enabling video calls and transactions between users on different blockchains, thus overcoming the limitations of the multi-chain model where interactions are confined within the same blockchain.
- Utilizing cross-chain communication protocols or bridges to facilitate secure and efficient interactions across blockchain boundaries.
- Enhancing user experience by providing a seamless service that integrates the diverse blockchain ecosystems into a cohesive platform.

Cross-chain capabilities will allow Umay Protocol to fully realize its vision of a decentralized, interoperable, and universally accessible video communication platform. Users will no longer be restricted by their choice of blockchain and can freely interact with any other user on the platform, regardless of the underlying blockchain network they are on.

# Umay's Architecture and Technologies

## Overview

An overview of Umay Protocol's architecture, along with the technologies that power the protocol are briefly explained below.

## Simplified Architecture
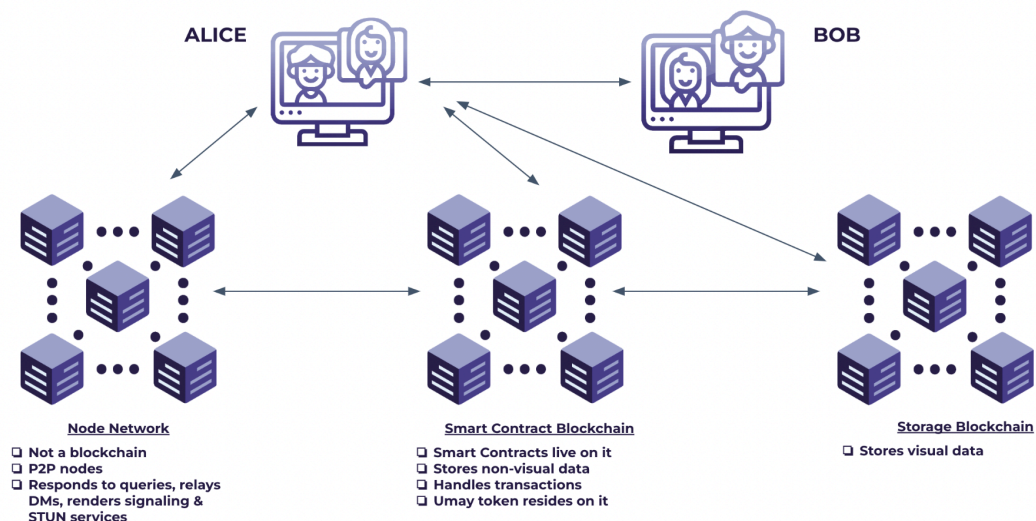


In the figure we see Alice and Bob are having a video call using Umay. The video data, as it is peer-to-peer, goes back and forth only between them. On the other hand, Alice is connected to three networks (Bob is too, however, for the sake of clarity the lines connecting Bob to the networks are omitted) which are briefly described in the following.

Firstly, the network on the left represents Umay's node network, which is a peer-to-peer network consisting of nodes that provide various services required by the protocol, such as signaling and STUN services, TheGraph Protocol node service, and a DM relaying service.

Secondly, the network in the middle represents the smart contract blockchain, which hosts the protocol's smart contracts responsible for executing on-chain transactions. This blockchain also stores non-visual profile data and financial data. The protocol's native token, Umay, is deployed on this chain.

And thirdly, the network on the right represents the storage blockchain, which is used to store visual profile data, such as images and videos uploaded by the protocol's users.

## Technical Architecture Behind Umay's Functionality

In this section, various technologies behind Umay's basic functionality are explained briefly.

### Profile data storage

Umay Protocol stores user profile data on different blockchains based on the type of data, with non-visual data stored on Avalanche, an EVM compatible L1 blockchain, and visual data stored on Arweave, a blockchain specializing in data storage. Storing media files on a storage blockchain, such as Arweave, has several advantages over storing them on a regular blockchain. Firstly, storage blockchains are specifically designed for storing large amounts of data and have mechanisms in place to handle the challenges associated with storage, such as scalability and cost. Secondly, storing media files on a separate blockchain can improve the performance of the protocol's main blockchain by reducing the amount of data it needs to handle. Thirdly, media files stored on a storage blockchain can be accessed and retrieved quickly and efficiently by the protocol's users, allowing for a better user experience. Finally, storing media files on a separate blockchain can provide an additional layer of security and privacy, as the media files are not stored on the same blockchain as sensitive financial and transactional data.

### Profile searches

Non-visual profile data can be searched using the Graph Protocol. The Graph Protocol allows for efficient querying and indexing of data stored on a blockchain. In Umay, non-visual user profile data is stored on the Avalanche blockchain, and the Graph protocol is used to allow users to search and retrieve this data efficiently. By using the Graph protocol, Umay can provide a user-friendly and responsive search function that allows users to quickly find and connect with other users, without the performance and scalability issues that might arise from trying to perform the same searches directly on the blockchain.

The protocol's node network functions as Graph nodes to enable this functionality.

### Flow of funds

All actions that involve a flow of funds are carried out on-chain and handled via smart contracts.

### Video calls

Umay employs WebRTC technology for peer-to-peer video calls. Though advertised as a peer-to-peer technology, a typical WebRTC implementation has several centralized components such as signaling servers, STUN servers, and in cases where peer-to-peer connections can't be established, TURN servers.

As a decentralized solution Umay Protocol doesn't resort to TURN servers which would transmit the video data through servers, as that would compromise decentralization significantly. However, on the other hand, the protocol makes use of signaling services that enable clients to discover and connect to each other, and STUN services that let clients discover their IP addresses, both of which are essential for WebRTC to work.

Although signaling and STUN servers are typically centralized, Umay Protocol operates as a decentralized solution by relying on a peer-to-peer network of nodes that serve as both signaling and STUN servers. More information about the protocol nodes will be discussed in subsequent sections.

Furthermore, transactions related to video calls, such as initiating and terminating calls, or locking up deposits and paying fees are handled on-chain through smart contracts.

## Protocol NFTs

Umay Protocol leverages NFTs as an access control mechanism, allowing only users possessing a protocol NFT to initiate a video call. These NFTs are minted for a fixed amount of stable coins and are non-transferable to prevent misuse. Therefore, the user's address used for NFT minting must be used to access the protocol, as using a different address would render the NFT unusable.

## The Node Network

Umay Protocol relies on a peer-to-peer network of nodes to perform a number of functions that it requires to operate, which are stated below:

- A signaling service, enabling clients to discover & connect to each other, per the WebRTC protocol.
- A STUN service, letting the connected clients obtain their IP addresses, per the WebRTC protocol.
- A Graph Protocol service, storing smart contract events and returning results for queries submitted by the clients.
- Instant Messaging relay service, transmitting messages between the clients.

A single node or a couple of nodes managed by a small number of entities would denote a centralized structure, however, a peer-to-peer network of many nodes that could be setup and deployed by anyone would constitute a decentralized structure. Hence, Umay's roadmap includes building infrastructure for a peer-to-peer network of nodes.

The nodes in Umay's network are incentivized to participate and contribute to the network's operations. They receive rewards based on their workload, with nodes that handle more connections or produce results for more queries earning more rewards

than nodes with lesser activity. This incentivizes the nodes to perform well and ensures that the network remains robust and reliable.

# Using the protocol

## Overview

In this section, a basic guidance is provided for the primary workflow. First, the basic terms and concepts are explained, followed by an explanation of the steps involved in the workflow.

## Basic Terms and Concepts

### Caller / Call maker

A user who initiates a video call by sending another user a request.

### Callee / Call taker

A user who has been sent a video call request.

### Fee

If the callee has set a non-zero hourly rate, the caller will pay a fee to the callee that will accumulate as long as the call continues. The callee can claim the amount once the chat is over.

### Status

Status indicates a user's availability for communication. There are six types of user status:

1. Fully Available: Users in this status are connected to the network and can receive Direct Messages (DMs) and Video Call Requests (VCRs) from all other users on the platform.
2. Favorites Only: Users in this status are connected to the network but will only receive DMs and VCRs from their designated favorite users.
3. DMs Only: Users in this status are connected to the network, open to receiving DMs from all other users, but not accepting VCRs from any user.
4. DMs Only from Favorites: Users in this status are connected to the network and will only receive DMs from their designated favorite users. They will not accept VCRs from any user.
5. Unavailable: Users in this status are connected to the network but have explicitly set their status to not receive any DMs or VCRs.

6. Offline: Users in this status are not connected to the network. They will not receive any DMs or VCRs.

### Deposits

Funds a user puts into the protocol so they can pay the fees when they make paid calls. Funds that haven't been spent yet or temporarily locked up due to an ongoing chat can be withdrawn anytime without limitations.

### Locked up deposit

When a video chat is initiated, the protocol locks up an amount of funds from the caller's deposit sufficient to cover the hourly fee of the callee. The locked-up funds cannot be claimed by anyone during the call. After the chat is concluded, the callee can claim the fee from the locked-up funds, and the remaining amount can be released by the caller.

### Stable Coins / Stables

A coin that is pegged to 1 US Dollar, such as USDC, USDT, or DAI. Currently only USDT is accepted across the protocol.

### Blocked Users & Favorites

A user can choose to block others. A user never receives instant messages or video chat requests from the users they blocked. Users can also mark others as favorites for convenience.

Both blocks and favorites are handled locally on the front-end currently. A decision on whether to allow users to perform these actions on-chain is not concluded yet.

## Primary Operations in the Workflow

### Activating a wallet address

A first-time user needs to mint a protocol NFT to enable its address to make video calls. Protocol NFTs are minted with stable coins.

### Depositing funds

A caller is required to deposit funds in their account before making a call. The deposit balance should not be less than the hourly fee of the callee. If the callee has a zero hourly rate, no deposit is required. If the deposit balance is less than the callee's hourly fee, the call request will fail.

### Withdrawing funds

Users can withdraw their available funds (funds that haven't been spent yet and aren't being locked up due to an ongoing call) without any limitations.

### Sending a call request to a wallet address directly

If the wallet address of the callee is known, directly entering it on the main page and clicking the CALL button sends a video call request to the callee.

### Searching users & viewing search results

A user can perform a search by specifying certain criteria to find other users to chat with. The search results will show profiles of users who match the specified criteria. The user can then view the profiles and send video call requests to the selected users.

### Status Setting

Users have the flexibility to control their availability for interactions through a variety of status options. This feature is critical for maintaining privacy, managing user accessibility, and enhancing the overall user experience. The status options are given in the section, [Basic Terms and Concepts](#).

Users must be connected to the node network for all statuses except 'Offline.' These settings are designed to provide flexibility in communication and privacy preferences.

### Direct Messaging

A user sends a direct message (DM) by entering another user's wallet address or selecting them from a list of contacts. Whether the message is received depends on the recipient's current status setting that controls their message availability. All messages are exchanged in real-time and are protected to maintain privacy, functioning similarly to standard secure messaging platforms.

### Making a call

1. When a user enters a wallet address or chooses a person from the search results and clicks the call button, a call request is sent to the other user if they are available. Please note that if the caller's deposited funds are not sufficient to cover the hourly fee of the callee, the call request will fail. It is also important to note that if the callee has blocked the caller before, they will not receive the call request.
2. If the callee accepts the call request, the caller initiates the call on-chain. This action locks up the caller's deposits in the amount of the hourly fee of the callee.
3. If the callee confirms on-chain, the video call starts. As long as the call is ongoing, i. the callee's fees will accrue, ii. neither of the users can take part in another chat.

### Extending a call

If the duration of a video call approaches an hour, both sides are asked to approve to extend the chat for an hour. If they do, funds of the caller covering a second hour of fees

are locked up. If the caller's available deposits are not sufficient, or any of them refuses to continue, the chat ends when the hourly duration is over.

### Ending a call

Both sides can end the chat anytime they want. When the chat is over, the callee receives their fees and the caller has their remaining funds unlocked. At the end of the chat, both users are given the option to favorite and/or block each other.

## Reputation Management

The Umay Protocol will introduce a reputation metric that ranges from 1 to 5, with 1 being the lowest reputation score and 5 being the highest. The reputation score serves as an aggregated measure of a user's reliability, trustworthiness, and overall positive behavior on the platform. A higher score indicates that a user is more reputable and can be trusted for interactions, while a lower score suggests that the user may be less reliable or engaging in undesirable behavior.

The reputation score will be calculated based on the following factors:

1. Recent call engagement metrics: Average call duration and the number of calls made and received in the past few months will contribute to the reputation score, demonstrating the user's recent activity and engagement on the platform.
2. Overall call volume metrics: The total number of calls made by the user since joining the platform will also be factored into the score, showcasing their long-term involvement and commitment to the platform.
3. Financial metrics: The fees paid and received by users during calls will be considered in the reputation score, reflecting their contribution to the platform's revenue generation.
4. Content appropriateness: AI-assisted analysis of the images and videos uploaded by users to their profiles will be used to determine a content appropriateness score, which will be incorporated into the overall reputation score.

We have consciously chosen not to include user ratings in our reputation management system. This decision stems from a recognition that user ratings are often susceptible to manipulation and gaming, which can compromise the fairness and reliability of the system. We believe that by relying on more objective metrics like call engagement, overall call volume, financial contributions, and content appropriateness, we can provide a more accurate and abuse-resistant measure of a user's reputation. This approach aligns with our commitment to creating a trustworthy and equitable environment for all platform users.

The reputation metric will provide users with an at-a-glance understanding of an individual's trustworthiness and performance on the Umay Protocol, encouraging users

to maintain a high reputation score by actively engaging and following the platform's guidelines. This system will foster a more secure, reliable, and positive environment for all users on the platform.

# Tokenomics

## Overview

The Umay Protocol utilizes two types of tokens: Stable coins and its own native token, $UMAY.

While stable coins are sufficient for full interaction with the protocol, individuals who want to receive yields based on the protocol's performance, node operators, and investors looking to participate in governance will need $UMAY.

## Token Utility and Functionality

$UMAY is required for the following special functions:

1. $UMAY holders can stake their tokens to earn a part of the protocol revenue.
2. Node operators must stake $UMAY as an SLA guarantee.
3. $UMAY holders will be able to participate in governance affairs once the DAO is operational.

## Max Supply and Inflation Schedule

We believe that decentralized protocols benefit from having a low emission of native tokens and receiving revenues in non-native tokens. Therefore, Umay Protocol's tokenomics is designed to have no inflation, as all revenues are in stable coins.

The $UMAY token has a hard cap total supply of 100,000,000, and all tokens have been premined. There will be no further emissions in the future.

## Distribution

The distribution of $UMAY is laid out in the following table:

| Stakeholder Category | % | Lockup & Vesting |
|---|---|---|
| Treasury(*) | 20 | 25% unlocked at TGE, 10% monthly for the rest |
| Team | 20 | 3 months cliff, 5% monthly. |
| Early Investors | 18 | 10% unlocked at TGE. 3 months cliff, 5% monthly for the rest. |
| Public Sale(**) | 3 | 100% unlocked at TGE |
| Growth(***) | 35 | 25% unlocked at TGE, 10% monthly for the rest. |
| Liquidity | 4 | 100% unlocked at TGE |

(*) Funds allocated for the treasury will be used for: i. Development, ii. Security audits, iii. Contingencies, iv. Marketing & promotions (when the growth fund is allocated entirely or already depleted), v. Further liquidity, when/if needed, vi. Allocations for unforeseen opportunities or requirements. Excessive funds in the treasury can be put to vote for distributing to token holders by the DAO after it has become operational.

(**) Proceeds of the public sale will, at least in part, be used to provide DEX liquidity as the quote currency. The remaining funds will be transferred to the treasury.

(***) Funds will be used for incentives such as airdrops or continuous rewards for users or compensating node operators and/or domain owners while the protocol progresses towards maturity.

# Vision and Roadmap

## Vision

The long-term vision for the Umay Protocol is to become the top choice for decentralized video calls and chats, meeting the needs of professional service providers, service seekers, and casual users. The vision also features a diverse range of apps running on different domains, each targeting specific audiences, that are integrated with the Umay Protocol.

To that end, the team aims to achieve sustainable growth and development by focusing on three primary objectives:

1. Becoming the go-to solution for decentralized video communication: Umay aims to be the preferred platform for users who value trustless, secure, and swift payments, privacy, and censorship resistance in their video chats. Whether it's one-on-one or in the

later phases, multi-user engagements, Umay caters to those providing or seeking professional services, or those participating in casual activities like online dating.

2. Platform for all users: Our objective is to build a seamless, intuitive platform that caters to service providers, service seekers, and casual users alike. By offering a user-friendly experience, Umay aims to become a widely adopted and recommended decentralized platform, creating a strong community of enthusiastic users.

3. Application ecosystem: Umay Protocol is envisioned to support a wide array of applications across multiple domains, all integrated within the Umay ecosystem. This network of applications, tailored to specific needs ranging from professional services to personal connections, aims to broaden Umay's appeal and foster widespread adoption.

## Roadmap

To achieve its vision, the Umay Protocol team has laid out a roadmap consisting of several milestones that aim to address the key objectives mentioned above. The major milestones of the roadmap are outlined below:

Umay Protocol is an ambitious project that requires a great deal of engineering effort. Therefore, the project has a roadmap that will take about a year to complete following its initial launch. The major milestones of the roadmap are outlined below:

### Phase 1 - Testnet Launch: Q1 2024

The testnet will be launched to allow users and developers to test the protocol's functionality and identify potential improvements.

### Phase 2 - Mainnet Launch: Q2 2024

The official release of the Umay Protocol, enabling users to access the platform and engage in decentralized video calls and chats for professional services and casual interactions.

### Phase 3 - Classrooms & Webinars: Q4 2024

This phase, slated for Q1 2025, will enable service providers to host educational and professional group sessions, such as webinars and classroom-style training, expanding Umay Protocol's use cases in collaborative and instructional environments.

### Phase 4 - Staking and DAO Implementation: Q1 2025

Introducing staking for token holders and node operators, as well as transitioning the protocol's administration to a DAO, enabling token stakers to participate in decision-making processes.

### Phase 5 - Mobile App Release: Q2 2025

Enhancing the user experience by offering a mobile app that simplifies access to the Umay Protocol and its features.

### Phase 6 - Node Software Release: Q3 2025

Allowing third-party entities to launch their nodes and earn rewards for supporting the protocol, thereby expanding the network and improving its resilience.

### Additional Developments

In the ongoing development of the protocol, certain features are planned for implementation when the timing is deemed most appropriate. This approach enables us to observe the protocol's evolution and user needs, ensuring that the design and implementation of these features are well-aligned with the platform's maturation and the emerging requirements of our user base. These features include, but are not limited to:

- Reputation management system implementation: As previously outlined, this system will quantify user trustworthiness based on their activity, supporting platform integrity.
- File transfer functionality implementation: This technical feature will enable direct, secure file sharing between users, enhancing the protocol's utility for data exchange.
- AI content moderator implementation: Implementing AI for content moderation aims to automate and enhance the oversight of shared content, ensuring adherence to platform guidelines and user safety.
- Calendar Integration: This will allow users to schedule online chats and automatically integrate them with their personal calendars. This utility will provide seamless organization and time management capabilities for our users.
- Upcoming Events Directory: This feature will allow users to browse and select events of interest, promoting engagement and interaction within the community.
- Cross-chain interoperability: This implementation, a progression from the existing multi-chain approach, will enable Umay Protocol users to engage in video calls with participants on other blockchains.

## Further Phases

In addition to the scheduled milestones, several enhancements are projected to further enrich our platform, such as:

### Event Streamings

A significant development on our roadmap is the ability to decentralize online event streaming. This will enable users to participate in live events from any location, thus increasing accessibility to a wider audience.

In an effort to simplify user experience and broaden accessibility, we plan to integrate a credit card payment gateway. This will offer users the option to engage with the protocol without necessitating blockchain transactions, thereby lowering the barrier of entry for individuals new to the world of crypto.

These forthcoming advancements underscore our commitment to evolve and refine our offerings, aligning with the dynamic needs of our users while maintaining the core principles of our protocol.

As usual with software products, the roadmap laid out above is tentative. New items can be added, existing ones can be removed, or priorities and deadlines can be adjusted in order to enhance product-market fitness of the protocol. Furthermore, once the DAO governance is established, DAO decisions can alter the course drastically as the roadmap will be a key responsibility of the DAO.

It should be noted that while the team is dedicated to meeting the milestones on time, there may be delays due to the fast-moving nature of blockchains and decentralized protocols, which are subject to significant risks.