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DLUX White Paper

Decentralized Limitless User Experiences and the DLUX Token

Introduction

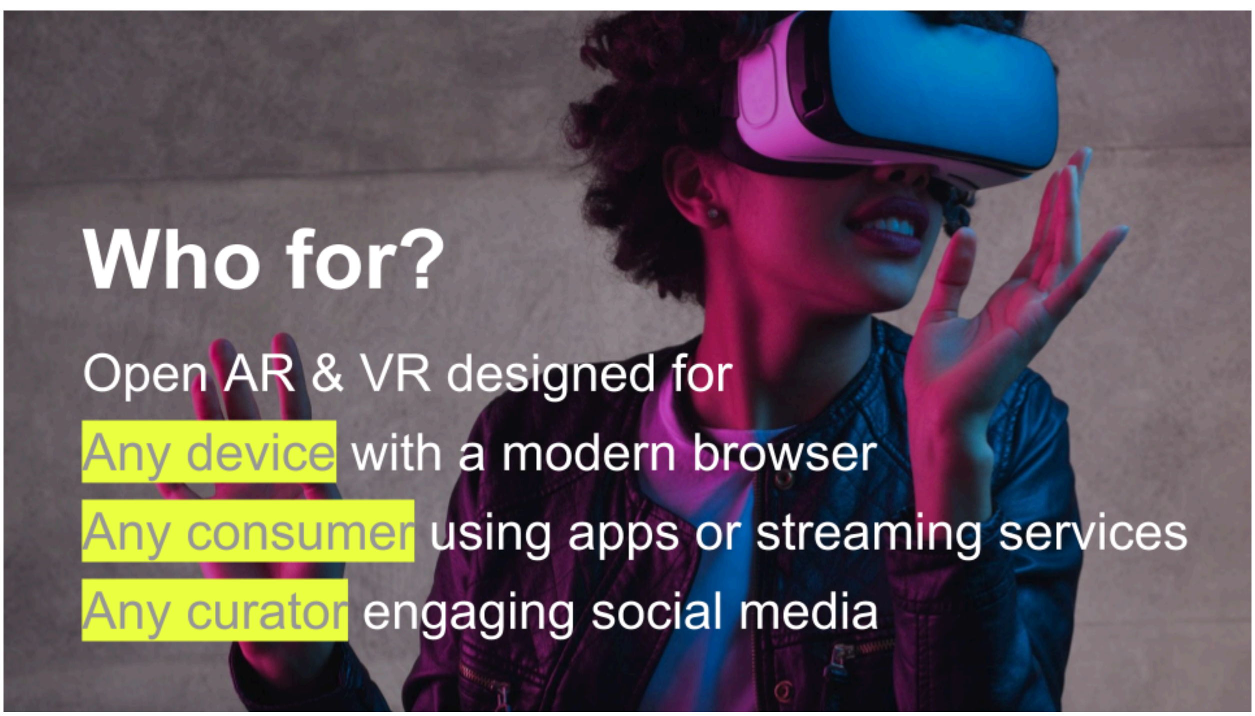
Create your shared reality

Welcome to incentivized XR adoption. We created an open-source social platform capable of scaling that is responsive enough to run on phones, headsets, and desktops—and rewarding people to make and engage new realities.

Old internet is a circular economy with advertisers, financiers, and products. Content you create and upload exists in centralized server silos where it can be censored, taken down, and regulated—you don't own your data. You may not even be able to monetize it. You are the product being sold to advertisers.

New internet pays content creators and curators through a decentralized distribution system with incentives to post and upvote social and interesting XR content. Attention is the ultimate currency. You control your data and get paid directly for it's value to the network.

HIVE account holders can utilize our [public web-based IDE](#) to craft XR experiences NOW.



By offering people a method to share freely, and rewarding those people with stake, we are organically building a future where good ideas flourish and bad ideas wither. This is a neural network—a p2p economy with incentives baked directly in to every edge of the network.

The vision is grand but we're building it one relationship at a time. By partnering with people to help them achieve their goals, we're crowdsourcing functionality.

This is a platform that rewards it's developers, content creators, and content curators for the value they add to the network.

The barrier to entry is zero.

Abstract

Make anything, earn crypto

Decentralize and monetize knowledge and experiences at dlux.io

Dlux is the first extended reality platform with zero barriers to entry that runs on any modern device with a web browser, offering creator and curator incentives through the Hive blockchain and DLUX token.

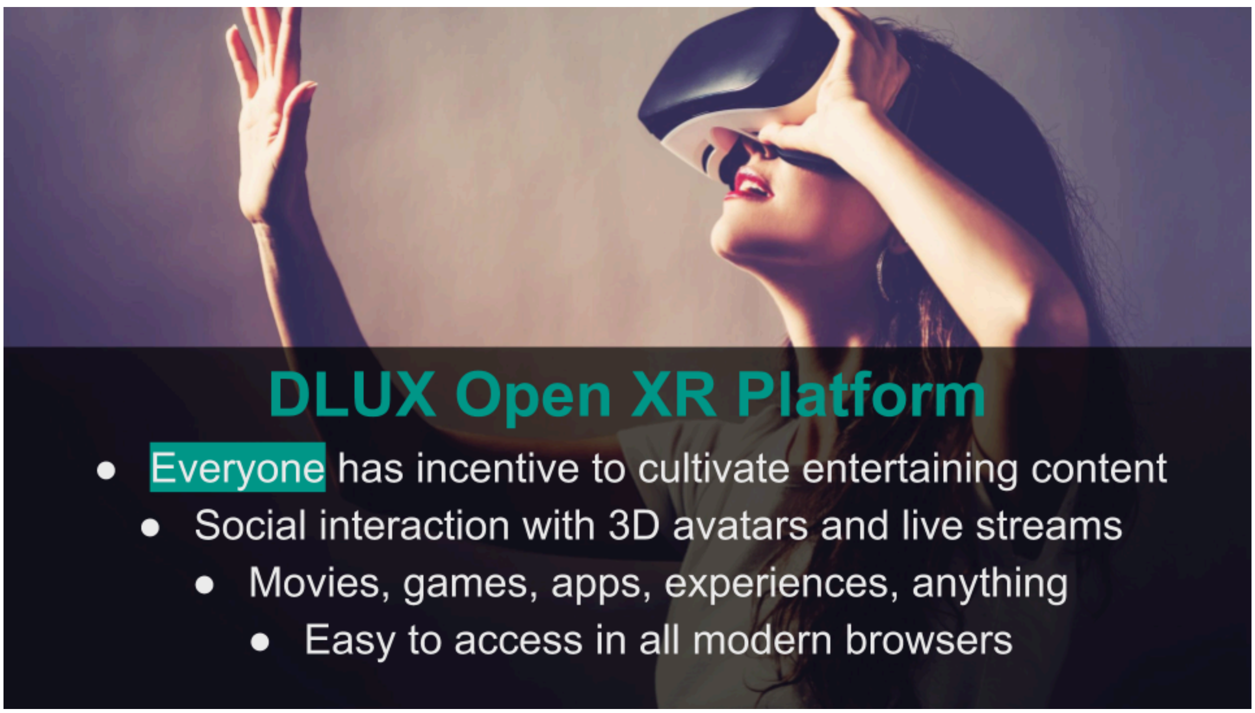
Artists can use any 3D modeling, 360 video, or other established workflows in combination with our app-container code to create WebXR that interacts with the blockchain. They can use any API and javascript framework from AR.js to TensorFlow.js to interact in the real world in any way they can communicate to others.

Build p2p commerce logic directly able to trigger wallet transactions, even incentivized customized web apps as posts. Incentivized programming, with a human feedback loop.

Anyone can use the vast catalog of free 3D assets and environments online, and combine them together in the A-Frame inspector to create whatever you can imagine.

Publish your XR scene by uploading all files to IPFS and posting the hash to Hive. Monetize your scene's upvotes for seven days, get rewarded.

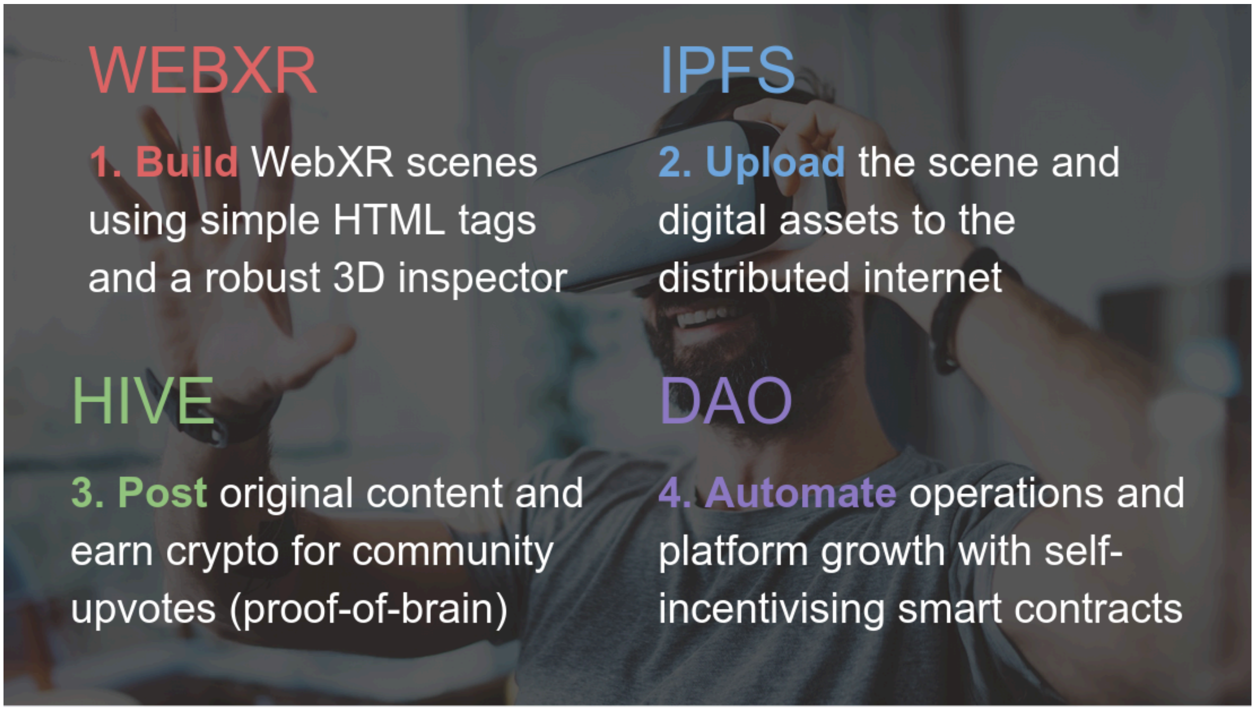
Creators make 45%, curators make 50%, and dlux keeps 5% in our token economy.



Capital enters the system from people purchasing HIVE to increase their own voting power through a process called Powering Up, which gives their vote more strength.

The net effect is content creators get a free publishing tool AND an audience that pays them, limiting them only to what they can imagine. The power to distribute knowledge with a way to encourage doing so.

Build p2p markets people can participate in to distribute resources like data pinning, storage, cpu cycles, to energy credits and raw material resources. Simply by opening a browser tab you could be contributing to global commerce and earning.



Architecture

We believe in the power of incentivizing cooperation.

We want to meet people on whatever device they have, in whatever reality they're in. Everyone deserves an optimized open-source platform.

1. **DLUX Token** distributed computing and smart contracting built on HIVE
2. **Hive** blockchain is an indelible record of software signatures and data storage
3. **A-Frame** is used to build WebVR scenes that run on anything
4. **AR.js** allows interaction with the real world through computer vision
5. **webRTC and TURN** allows real time p2p interaction across the table or across the world
6. **IPFS** is the distributed internet p2p delivery system
7. **HTML5** allows building any web app that can run in a browser - turing complete
8. **Developers** add features and build new tools with extensions

Social Design Layer (WebXR)

Software is eating the world, the internet is eating software, the internet runs on JavaScript.

A-Frame is a three.js framework with an entity-component-system that makes it easy to build WebVR using simple HTML tags. One codebase runs on Vive, Rift, Daydream, GearVR, desktop, and mobile including Cardboard.

WebRTC is a p2p protocol for allowing users to talk to each other after a signalling server connects them. Dlux provides one signaling server but you are welcome to use your own in the spirit of decentralization. With Public memo keys posted on Hive you can also be certain you are talking to a keyholder.

Javascript/HTML5 lets you build and deliver anything you can imagine.

API/Blockchain gives you the freedom to provide any experience or communication. Build custom incentivized logic that users can participate in. Train Artificial Intelligence based on the inputs of its users. The freedom to securely connect and store IoT access keys and provide XR interfaces with our devices in the most trustable way.

This makes our platform the most accessible XR platform on the market. Any device with a modern browser can interact with these experiences, and all you need is a PC to build them. Those who have high end computers and headsets will benefit from a more immersive experience.

Content Distribution Layer (IPFS)

Resilient, decentralized p2p distribution that's free to use.

XR scenes contain different textures, 3D objects, photos, and videos. Program content and application logic are also stored on IPFS. The hash for those files is referenced in the Hive post, but the files themselves have to be stored somewhere. We chose the InterPlanetary File System (IPFS).

IPFS is distributed internet built on peer-to-peer protocols like Git and Bittorrent. As long as your scene is pinned somewhere (like our node), it will be accessible—including developing worlds with high latency. This ensures resilient access to the indelible files so your VR scene will always be available.

Consensus Layer (Hive)

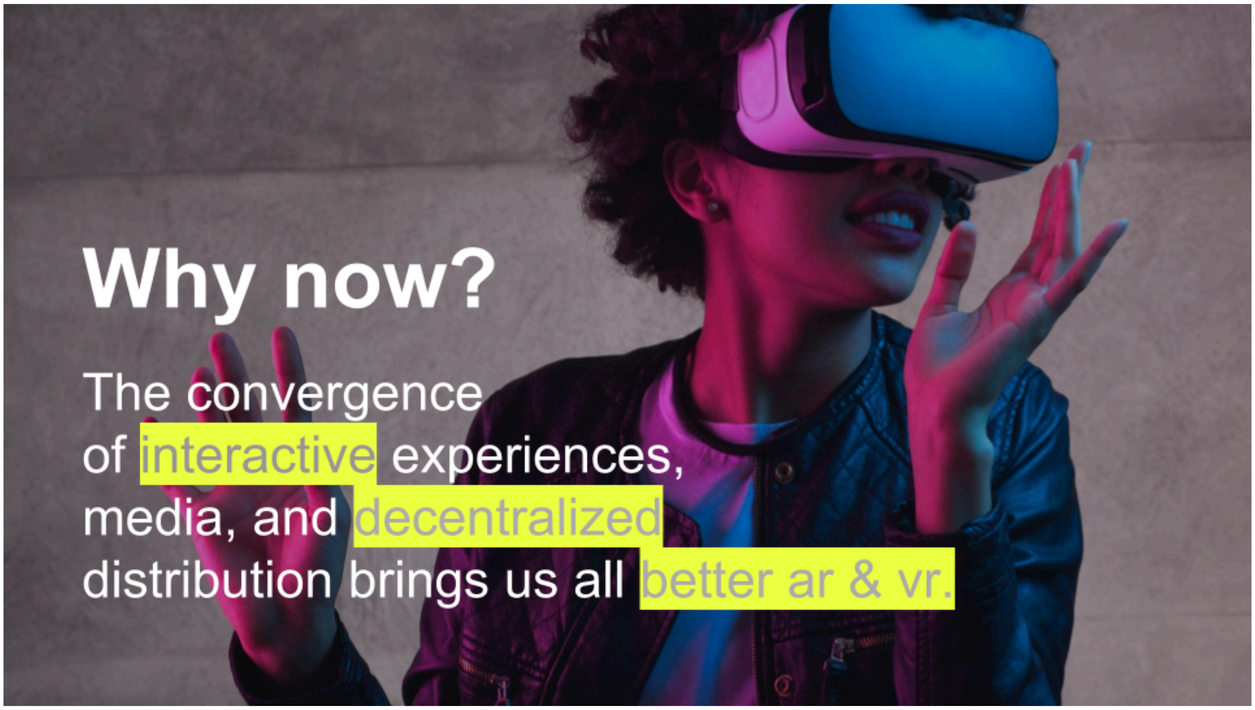
No ads. No limits. A new paradigm in publishing and distribution.

Hive is the social media blockchain powering dlux. Because it's connected through user profiles and tags, dlux can suggest relevant content and construct a **traversable world** that grows organically through incentive to generate valuable content.

The incentive is based on delegated proof-of-stake (DPOS)—a fast, efficient, decentralized, and flexible consensus model proven for years.

Creators add value to the network by feeding the demand for engaging and entertaining content, competing for user attention to monetize.

Curators who find interesting new content and stake their vote to elevate it are rewarded for adding value that draws new users to the platform and entertains existing users.



Extension Layer (Developers)

Get along and be free!

We want dlux to be open and full of plugins that power any imaginable type of experiences.

If you are a developer and want to incorporate virtual reality into your project, please join our Discord server and GitHub repo. Software posted on Hive is signed by developers, building trust relationships to avoid phishing and spam.

Dlux also offers ways to interact with IoT devices, securely communicate and transact. The program logic is capable of triggering wallet transactions which code even program dynamic logic. Turning users into oracles of their own smart contract. Users are offered the choice to participate.

Economy

Creators, Curators, DLUX, Developers

Everyone gets paid for adding value to the project

On the Hive blockchain, all accounts are curators. There is a 25% incentive for accounts to curate good content through upvotes and reposts. Seek out new entertaining content and stake your vote on it, the network will reward you.

Creators naturally earn the largest portion, 45%. While curators earn 50% this is usually spread across several accounts, including the creator. The Hive post is monetized for seven days, after which all rewards are paid out. Keep posting, keep earning HIVE.

The project itself is on GitHub, and anyone can contribute. After fixing issues or adding features, document your work for the project on utopian-io to earn rewards. This is the economy for open source development.

Social Impact

Transfer wealth to anyone online who provides value to the network. Those everywhere including developing worlds get paid for their voice, and their contributions.

With incentivized development, content creation, and content curation, the platform itself becomes a method of employment and social mobility.

There are **developers** in every country looking for interesting projects to join. Our community is completely open and your contribution is monetizable for crypto, start coding now!

There are **content creators** all over the world with imaginations and visual stories to tell. The falling cost of 360 cameras and the first class free 3D content online makes anything possible.

There are 3D **artists** and scene designers are looking for new markets and ways to monetize their assets, but also participate in larger art projects. Smart contracts make that licensing work.

We are all **curators** and deserve to be paid for that too! Become an influencer just by upvoting good content on the network, stake your vote to earn rewards.

DLUX DAO

Initially we planned to leverage improvements to the HIVE ecosystem(SMT) to run DLUX in a trustless manner. However, we've since developed our own Decentralized Autonomous Organization to automate all aspects of operations. This includes automating IPFS content pinning, forming a DEX without a centralized trust, and a distributed compute platform for user defined smart contracts.

Utilizing Multi-signature abilities of Hive we will distribute the keys to the funding account amongst the operators of the nodes. We will weight voting to node operators who can now automatically approve of worker proposals or initiate vetoes to certain actions. Through software all aspects of voting and governance will be distributed amongst its participants.

The DAO is a software package any HIVE user with adequate resource credits (~120 HP) can operate to facilitate information symmetric asset exchange across asset boundaries. This can include off-chain resources through an oracle network, or elected confirmations. The nodes maintain consensus of voting, delegation, contributions, assets, and reports.

This open source platform can algorithmically pool HP for the resource credit cost of being in the network. An autonomous cooperative with collective control of resource allocation.

There is no single entity that has any special privileges with regards to the DAO. Enter the ecosystem in any agreeable way.

DEX (Decentralized Exchange)

Each node utilizes signed hive transactions to modify the agreed upon DAO state. This allows the DAO to also agree upon which nodes are required to perform actions to facilitate user needs.

HIVE/HBD to DLUX, DLUX to HIVE/HBD to provide liquidity for utility tokens issued by the DAO or purchased from it.

Utilizing atomic swaps stored either in DAO or on Hive based escrow transactions allows these asset exchanges without a single trusted third party. The Atomic swaps are properly leveraged by collateral presenting trustless ways to engage the DAO. In exchange for signing these swaps the node operators are paid DLUX.

The DAO also distributes DLUX to delegators and uses it’s built in content voting system to allocate DLUX rewards to content producers and curators.

Atomic Swaps Technicals example

Atomic swaps are “all or nothing” trades.

Because DLUX DAO is built with consensus on DPOS, atomic swaps do not require hash time-locked contracts (HTLCs) to prevent foul play.

Swaps are listed in the DAO by initiating properly formatted HIVE escrow* transactions.

1. User wishes to purchase 1 DLUX for 0.25 Hive:
    a. User utilizes public API to query for node operators with sufficient balance(B-receiver agent) and standing(B and A-agent)
    b. Places a 0.25 HIVE escrow transaction to node B with node A as agent.
    c. All nodes append expected actions to queue, which nodes A and B sign as escrow approvals. Swap is now listed and secured via networked liquidity.
    d. Seller sees listed swap and sends an Active authorized custom JSON with 1.000 DLUX.
    e. All nodes track the progress of exchanging assets moving DLUX as collateral(Node B 2 DLUX collateral)
    f. Node B signs an escrow dispute.
    g. Node A releases funds to Node B
    h. Node B sends 0.25 HIVE to Seller
    i. DAO releases collateral back to Node B and Credits all required transactions from the node operator allocation.

tl;dr - DLUX DAO creates a virtual operations with an expiration that releases funds back to the Initiator if no purchase is made.

This DAO and DEX architecture is being built in a modular way so any HIVE community or project can take advantage of it.

Use Cases

Selected use cases:

[Discover DaVinci – A Gamified Blockchain Learning App]

Arts

A mural is painted and a QR code displays the story and information as well as a vote button. 1% DLUXIO is earmarked for a global public arts program.

Ridesharing

Bicycles and scooters can be rented for an upvote or micropayment.

Infrastructure

Fix a sidewalk or trim a local tree. If anybody appreciates your work they can incentivize you to continue. 1% of DLUXIO is earmarked for the Yensesa Community in West Africa

VR Classroom

Visit a new way to incentivize education in virtual reality. Award people who can effectively educate you. 1% of DLUXIO is earmarked for decentralized science.

VR Concert

Host a DJ set for your friends around the globe. Interact in real time.

Tip Cards

Have a card you can leave at the table so people can tip you for your service.

Game

Chess board in park can become AR marker, allowing you to play chess with somebody at a park or chess board around the world.

We believe all essential services can be provided through use of this protocol in a purely voluntary manner.

Roadmap

Software

- March 1st DEX and DLUX Sidechain operational
- May | Multi-Signature ownership of chain
- Smart Contract Platform integrated into the DLUX node software. Distributed computing platform

Reasons for DLUX Consensus Sidechain

- Control and consense upon autonomous logic to pay contributors and curators
- Operate an information symmetric exchange to remove centralized trust
- Provide a smart contract platform to further automate user requirements
- Utilize smart contracts to pin IPFS content autonomously
- Distribute trust across the elected network to form an autonomous finbody

DLUX Token information

- Inflation: 5%APY
    - Content rewards
    - Node incentives
    - Delegation incentives
    - IPFS payments
    - Compute time for smart contracts
    - incentivizes social good by bringing blockchain to reality
- Total starting supply: ~11,000,000
- ~1% donators and delegators to date.
- 1% cofounder @disregardfiat
- 1% cofounder @markegiles
- ~8% Held by @dlux-io
- 100,000 DLUX for sale per day until 100M DLUX in circulation. Automated market with price floor/ supply restriction to prevent oversaturation.
- Remaining for network growth (new users) and incentives

Voting Metrics

- K1([votes]*[last activity of voter])+K2((successes/average of witnesses successes)*(success/attempts)successes)
    - K1: Voter Weight - int 0-10000
    - K2: Block Signed Weight - int 0-10000

- More Information
- dlux.io
- Github
- @dlux-io
- Discord
- otolux.la
- Slide Deck

Disclaimers

- Donators will be allocated DLUX tokens based on open algorithms which can be tracked at token.dlux.io and our github
- ALL dlux intellectual property is licenced as MIT or CCBY.
- DLUX token may not hold it's value but should never lose it's utility.
- Proceeds will be utilized for purposes stated at the discretion of keyholders
- DONATIONS ARE NON-REFUNDABLE AND CANNOT BE CANCELLED.
- THESE STATEMENTS HAVE NOT BEEN EVALUATED BY THE SECURITIES AND EXCHANGE COMMISION. While we do not believe these tokens constitute a security US Citizens(and all humans) are reminded buyers carry ALL RISK.

Footnotes:
* The purpose of HIVE Escrow operations are to enable someone to send money contingently to another individual. The funds leave the *from* account and go into a temporary balance where they are held until *from* releases it to *to* or *to* refunds it to *from*.
In the event of a dispute the *agent* can divide the funds between the to/from account. Disputes can be raised any time before or on the dispute deadline time, after the escrow has been approved by all parties.
This operation only creates a proposed escrow transfer. Both the *agent* and *to* must agree to the terms of the arrangement by approving the escrow.
If either the sender or receiver of an escrow payment has an issue, they can raise it for dispute. Once a payment is in dispute, the agent has authority over who gets what.
The permission scheme is as follows:

- If there is no dispute and escrow has not expired, either party can release funds to the other.
- If escrow expires and there is no dispute, either party can release funds to either party.
- If there is a dispute regardless of expiration, the agent can release funds to either party following whichever agreement was in place between the parties.