

For this topic I'll be posting progress following my research/dev journey with Taiko zkEVM.

Currently I am developing some foundational elements for zkEVM-enabled dApps & Interactive/Gaming NFTs! Its about time I started sharing some of this work.

Lets get into it:

Early Development Screenshots: Retro Console Terminal 'research', EVMachina Prealpha Menu

Introductions

If you've seen my work in the Loopring space you'll know I've been experimenting with & actively creating interactive experiences (ie interactive NFTs) for a while now!

I've been enjoying working on digital art and game ideas in the web3 space which people can connect and interact with. There is a lot of room for innovation in this space.

My main focus has been here on Ethereum Layer 2 with Loopring (and now Taiko as well!). This of course involves a mix of app/web development, game development and digital art - areas I have experience in from outside the web3 space.

However - developing interactive NFTs and web3 projects has had its limitations so far on Layer 2. Without the ability to utilize EVM/Smart Contracts (and not wanting to substitute with in web2 solutions) its meant developers have had to hold off on various features and project ideas. These are limitations which I am very excited to see Taiko/zkEVM overcoming currently.

Some Digital Art Examples

These past couple of years I've found myself diving deeper into my web3 projects. With zkEVM now coming into play my focus has turned to bringing Taiko into these projects to utilize Smart Contracts to enable new and exciting features.

Some relevant & recent examples of my digital art/web3 work to check out:

- ◆ [Loopy/Loopette Drop #03 - Heart Example](#)

[Interactive NFT prototyping with 2D elements]

- ◆ [Retro Console App /with AI](#)

[Interactive NFT with retro gaming, video, AI experiments]

- ◆ [Metaboy #3173](#)

[Rebuilding one of my Metaboy NFTs as a 3D Interactive NFT & developing a 3D NFT pipeline]

- ◆ ['LoopBlaster'](#) (Tournament) / [Test Run](#) / [Semi Finals](#) / [Final Round](#)

[NFT giveaways with a competitive twist, Unity Game with web3 potential]

- ◆ [Delta Visual Render](#)

[Recent digital art, 3D scanned elements, visual rendering + development thread]

[\[imgur version\]](#)

The Road Ahead: Prototype EVMachina

I have a real passion for many things retro!

This has lead me to creating an [Interactive Retro Console](#)' (as seen in the GIFs at the start of this thread). So far this Retro Console has been my place to prototype and experiment with web3 ideas (and yes the console itself and apps & games within can be all

be minted as NFTs).

As mentioned, this retro console has several games built-in (ie demos of my own versions of Pacman or Snake) but this next game I am developing (EVMachina)

will by my first real web3 game, and will therefore require zkEVM for the more advanced functions.

This early prototype will be a multiplayer RTS battle-game (tournament style) with web3 functionality.

The main goal here is to develop and test web3 functionality utilizing Taiko/zkEVM:warning:

There are many directions development here could take, and various other ideas I have for web3 projects - so it is worth keeping in mind from the start that this is a prototype project, and is currently in an early prealpha stage, please don't expect the next halo game but rather an experimental indie experience - which could develop in any number of directions & include perks for supporters and alpha testers

Getting into the specifics of that web3 functionality, and what I am working to utilize zkEVM/Taiko to enable:

◆ Modular Player Characters

- Player ownership (via NFTs) of your character(s)

◆ Item & Asset Customization

- The same ideas of ownership apply for items also, and these items will 'plug in' and customize your player character, enabling new/enhanced abilities and unique aesthetics. There will of course also be rarity levels for items.

◆ Portable-Gaming

- I am experimenting with building these gaming experiences (or user interface components) into NFTs - which means you can take the game and items/characters anywhere your wallet goes

◆ Much more TBD/TBA

- From smart contract enabled scoreboards & progress tracking (achievement/rewards), these are just the immediate examples of ideas I am working towards. There are many other areas to delve into here (too many options, not enough dev time!)

I will be posting more about the game itself in upcoming updates as development progresses.

Stay tuned!

Why? What? Web3?

I am seeing some exciting potential and benefits in having zkEVM/Smart Contracts in web3 gaming & dApps. There are many elements to be explored and developed moving forward, including:

◆ Ownership

- Owning & controlling your own in-game items/assets & being able to openly trade/invest those items whenever and however you want, external to any in-game system or economy

◆ Security

- Utilizing ETH for player/item validation & hacker-proofing of gaming systems

◆ Cryptocurrency Integration

- web3 is of course a part of the crypto industry overall, enabling token/coin integration and an overall ability to adopt and work alongside digital & decentralized currencies + grow along side these expanding industries and projects

◆ Decentralization

- More power into the hands of players, automated systems which work for

gamers. More gaming, more fun, less centralized sources of power to get in the way

◆ Transparency

- Blockchain tech is immutable and public, this keeps gamers and games more honest and open

◆ Global Accessibility

- Web3 is accessible around the world, and can serve as a distribution platform for games and gaming assets

◆ Scarcity, Rarity, Opportunity

- Players can earn in-game or win items of real value and the potential to find rare items of high value adds another level of excitement and fun!

End Notes

It is also worth noting here that - I aim to share this knowledge with you all as well!

There are some great developers here in the Taiko community and also new

developers wondering how to get started. As I continue this dev-journey I want to provide educational/tutorial content to show others how to start their own web3 projects on Taiko/Layer2. I want to do my part in making web3 easier to access + connect with other likeminded developers or crypto enthusiasts as we march towards that Taiko mainnet launch & beyond

The tsunami of DeFi & dApps being built on or moving to Layer 2 is coming - lets be a part of it!

-Alex_ADEdge

To follow my projects/digital art → Find me on Twitter or jump into my Discord!

[

](https://twitter.com/Alex_ADEdge)

[

](<https://discord.gg/fQxUKmB5z3>)