

X ACROSS

# Unifying Ethereum

## With Intents and ERC-7683

Hart Lambur, Devcon SEA

13 November 2024

4 years ago Ethereum  
had a scaling problem

# November 2020

**15 TPS**

ETH TPS

**>>\$50**

Cost of Uniswap Swap

Ethereum Magicians Sign Up Log In

## A rollup-centric ethereum roadmap

ethereum-roadmap, layer-2

vbuterin 4 Oct 2020

### What would a rollup-centric ethereum roadmap look like?

Last week the Optimism team announced the launch of the first stage of their testnet, and the roadmap to mainnet. They are not the only ones; Fuel is moving toward a testnet and Arbitrum has one. In the land of ZK rollups, Loopring, Zksync and the Starkware-tech-based Deversifi are already live and have users on mainnet. With OMG network's mainnet beta, plasma is moving forward too. Meanwhile, gas prices on eth1 are climbing to new highs, to the point where some non-financial dapps are being forced to shut down and others are running on testnets.

The eth2 roadmap offers scalability, and the earlier phases of eth2 are approaching quickly, but base-layer scalability for applications is only coming as the last major phase of eth2, which is still years away. In a further twist of irony, eth2's usability as a data availability layer for rollups is likely to be a long time off.

# And it worked

## A rollup-centric ethereum roadmap

ethereum-roadmap, layer-2



vbuterin

4 Oct 2020

### What would a rollup-centric ethereum roadmap look like?

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## Daily average TPS

2020 May 31 – 2024 Nov 08

**336.38 TPS**

26.08x 

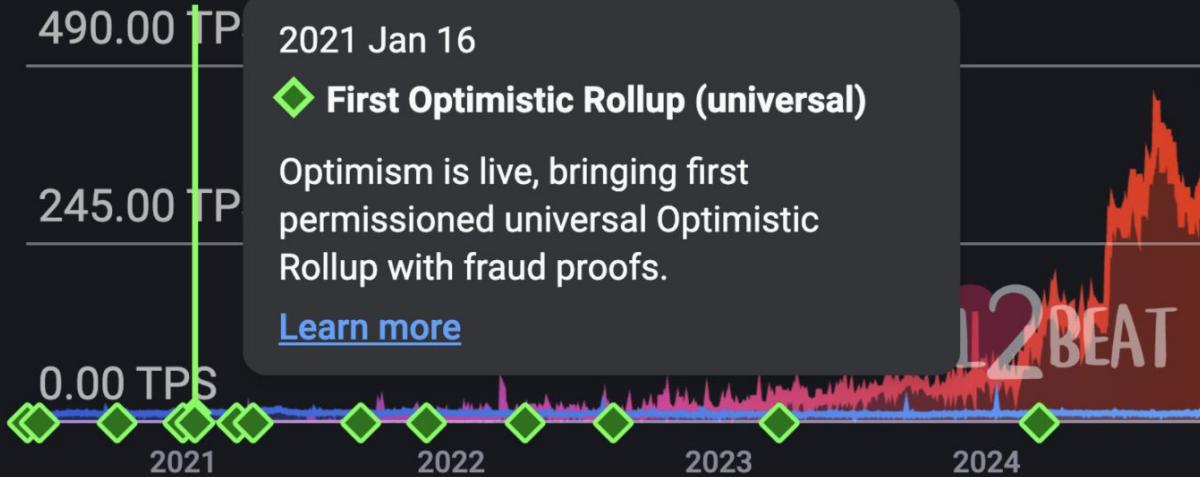


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26.08x 



## Daily average TPS

2020 May 31 – 2024 Nov 08

**336.38 TPS**

26.08x 

490.00 TPS

245.00 TPS

0.00 TPS

2021 Aug 31

◆ First public Optimistic Rollup (universal)

Arbitrum removed whitelist, becoming first publicly open universal Optimistic Rollup.

[Learn more](#)

2021

2022

2023

2024



## Daily average TPS

2020 May 31 – 2024 Nov 08

**336.38 TPS**

26.08x 

2023 Mar 24

◆ First ZK Rollup with universal Solidity support

ZKsync Era is now permissionless and open for everyone bringing first zkEVM to mainnet.

[Learn more](#)



2021

2022

2023

2024

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26.08x 

490.00 TPS

245.00 TPS

0.00 TPS



2024 Mar 13

◆ EIP-4844 (Protodanksharding) is live on mainnet

Blobs create a new, cheap way to post data on-chain that is specialized for rollups.

[Learn more](#)



## Daily average TPS

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Daily average TPS

2020 May 31 – 2024 Nov 08

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26.08x ⓘ

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2021

2022

2023

2024

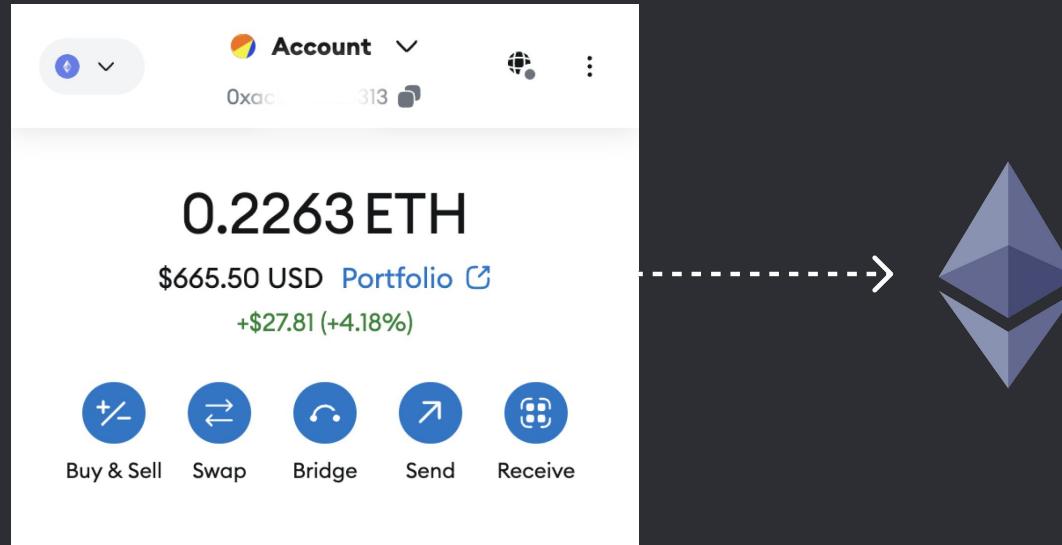
# We have scaled Ethereum!

L2BEAT

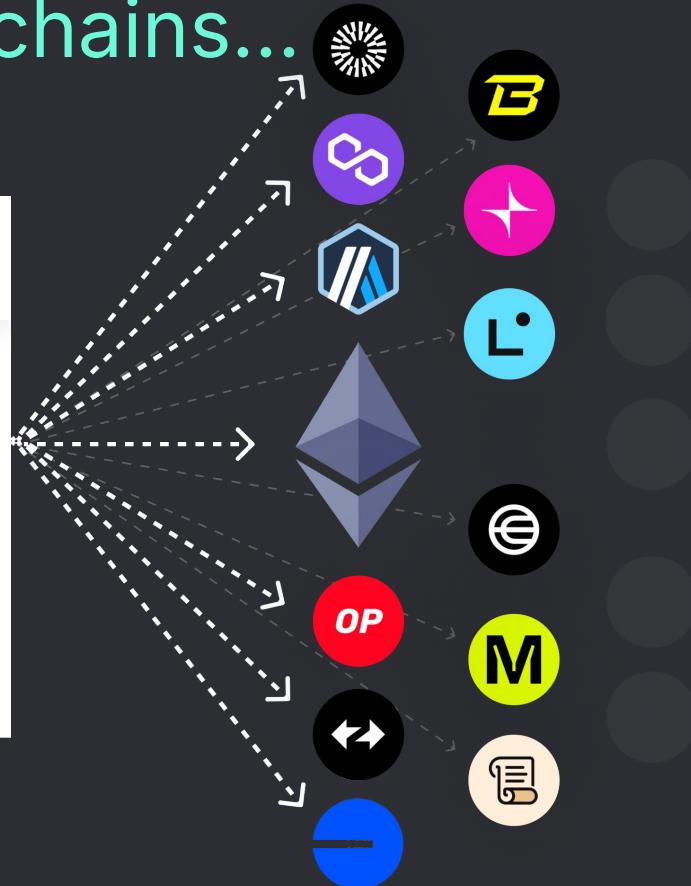
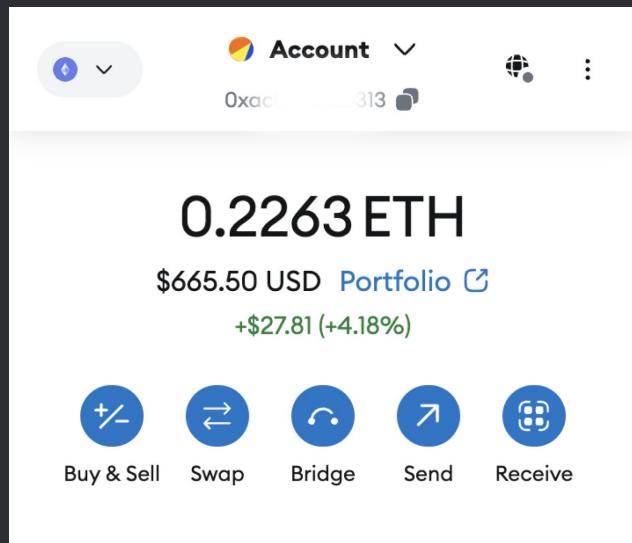
But we have a new  
problem....

# Ethereum is fragmented

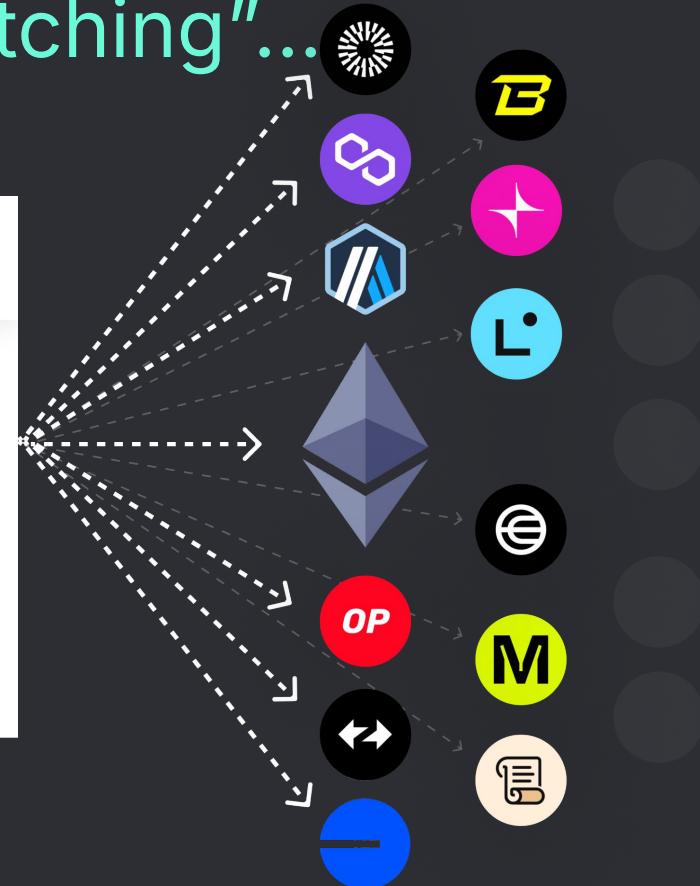
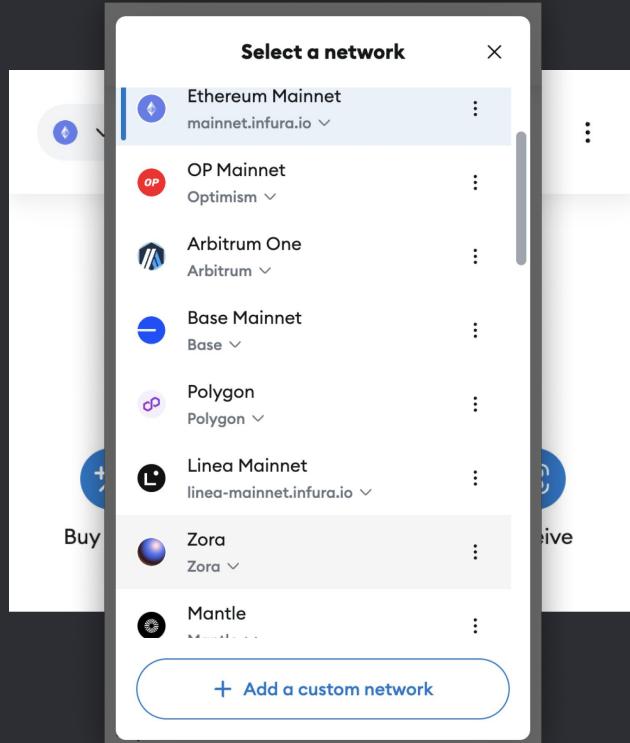
# Ethereum was simple back in the day...



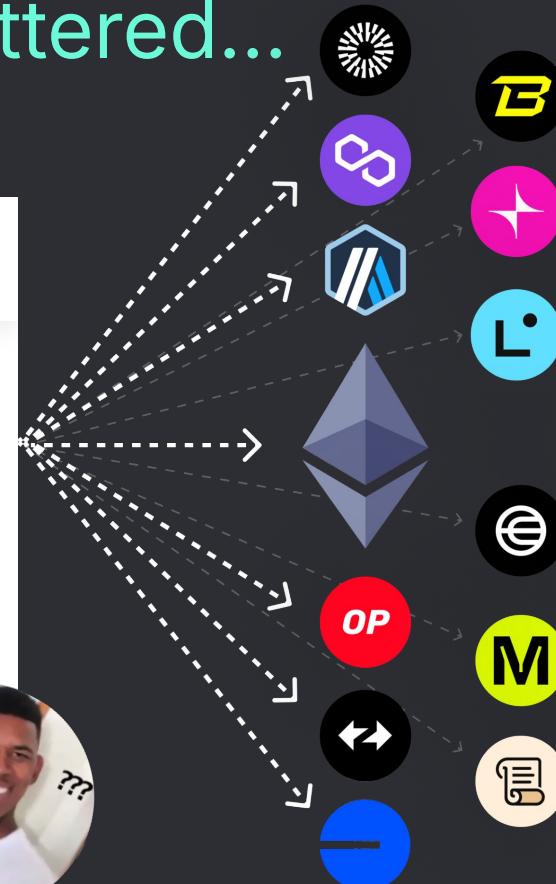
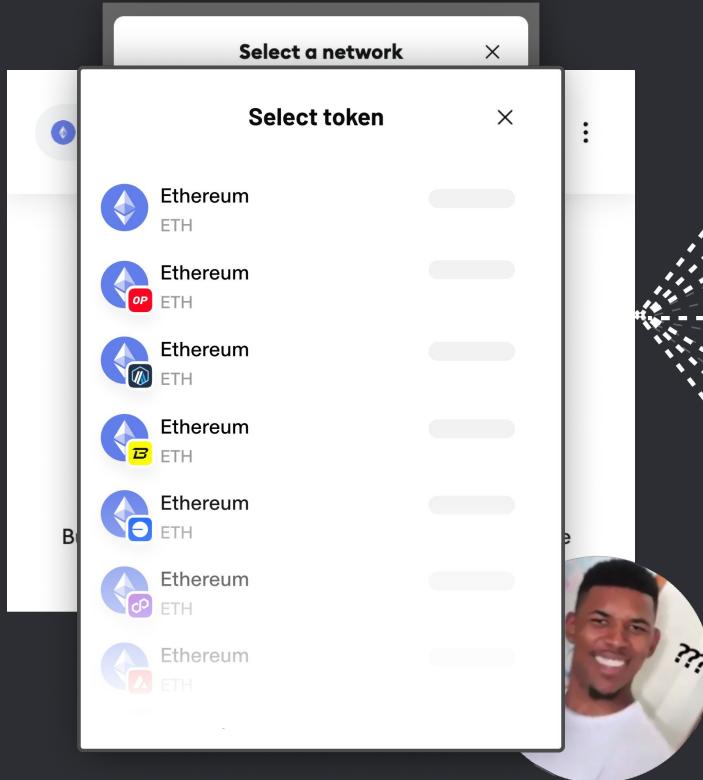
# But now we have a lot of chains...



# And a lot of “network switching”...

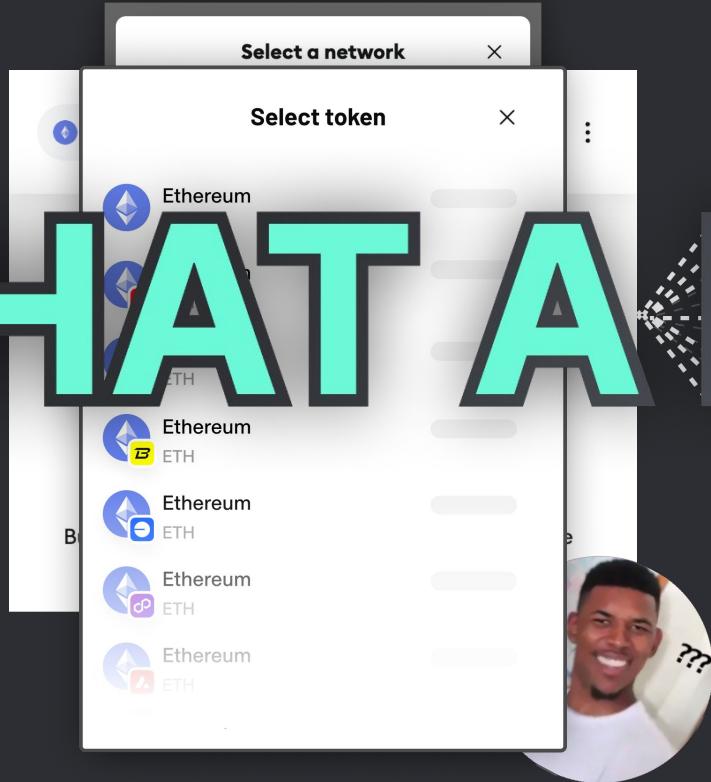


# And assets are super scattered...

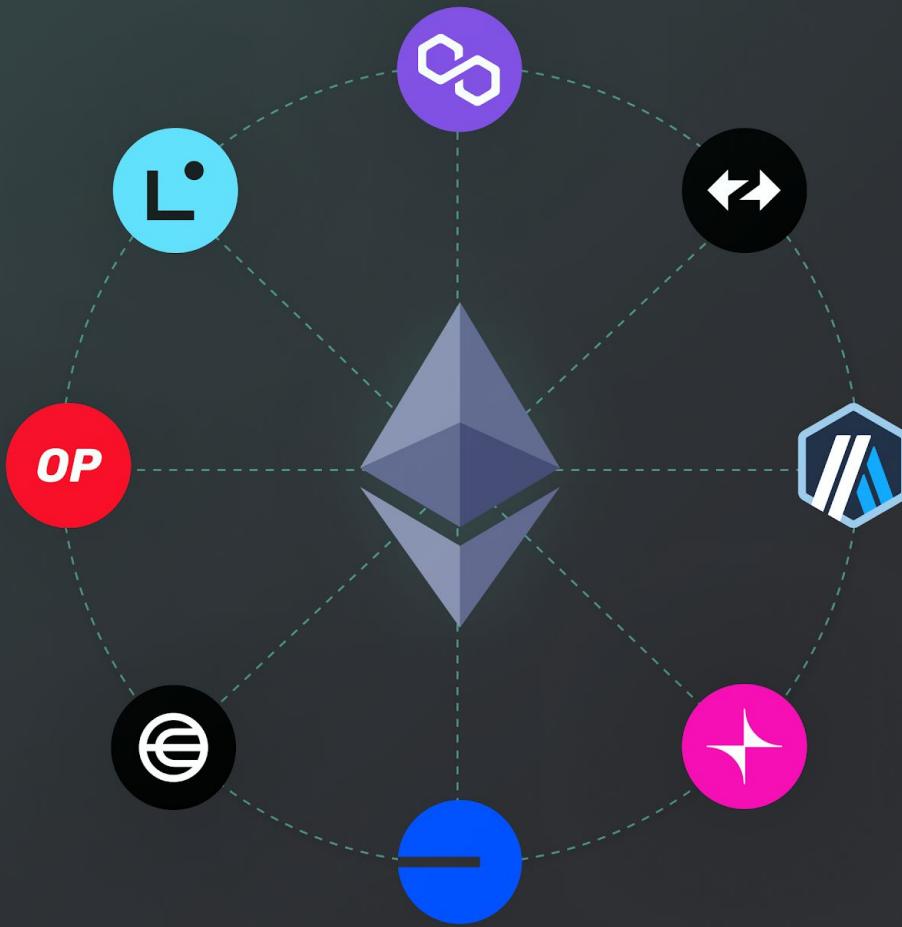


# And assets are scattered...

# WHAT A MESS



# Unify Ethereum



# There are a few components to Unify Ethereum

- Better app/wallet UX
- Account abstraction via 7702/4337
- Fast bridging

To unify Ethereum,  
interop needs to be  
**FAST**

It needs to be  
2 seconds



**53% of visits** are abandoned if a mobile site takes longer than **~2 seconds** to load

Think with **Google**

Intents  are the only viable  
mechanism to deliver the  
2-second experience

# “Traditional” Bridge Flow

Traditional Bridge

# 1. User deposits on Chain A



Traditional Bridge

## 2. Wait for finality on Chain A



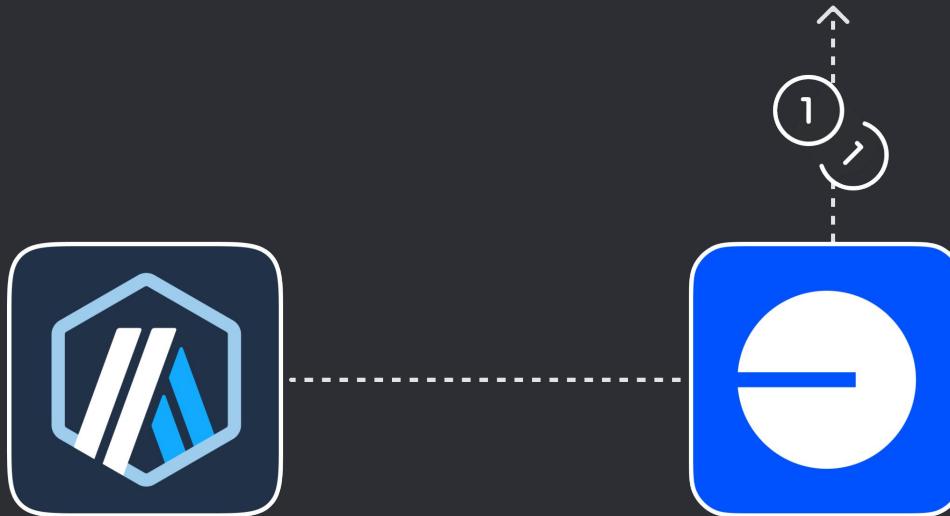
Traditional Bridge

### 3. Send message to Chain B



Traditional Bridge

## 4. After receiving message, release funds on Chain B



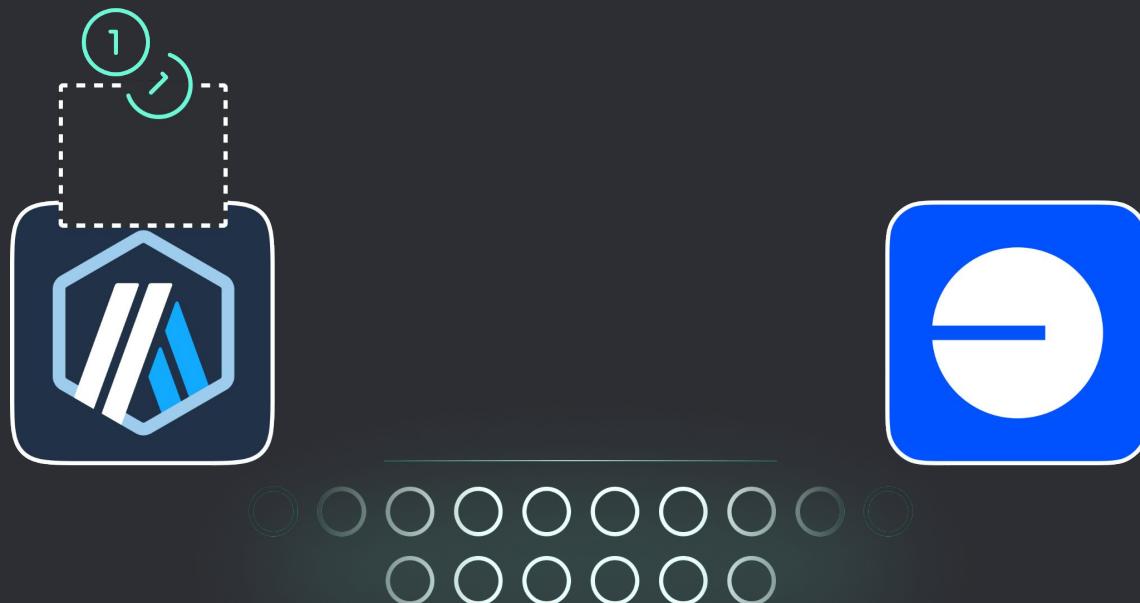
## Traditional Bridge



# “Intents” Flow

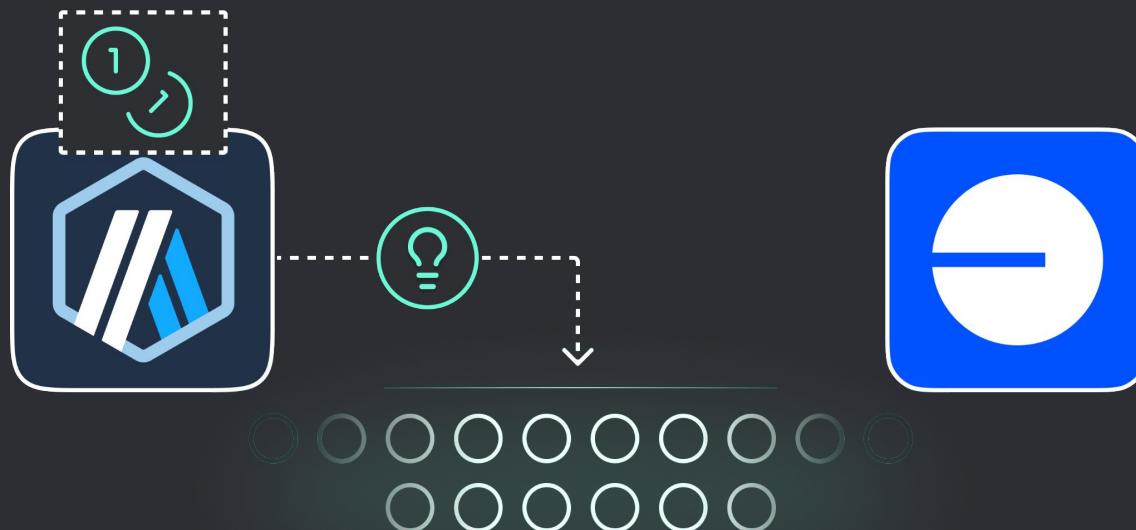
Intents Bridge

## 1a. Escrow user funds on Chain A



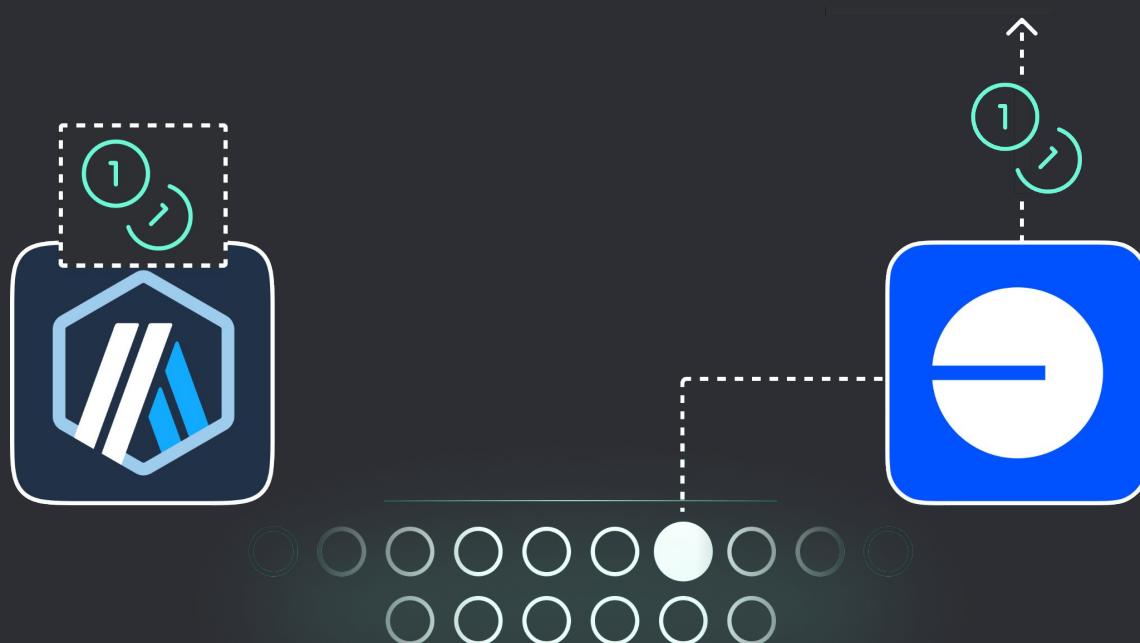
Intents Bridge

## 1b. Broadcast intent to solvers



Intents Bridge

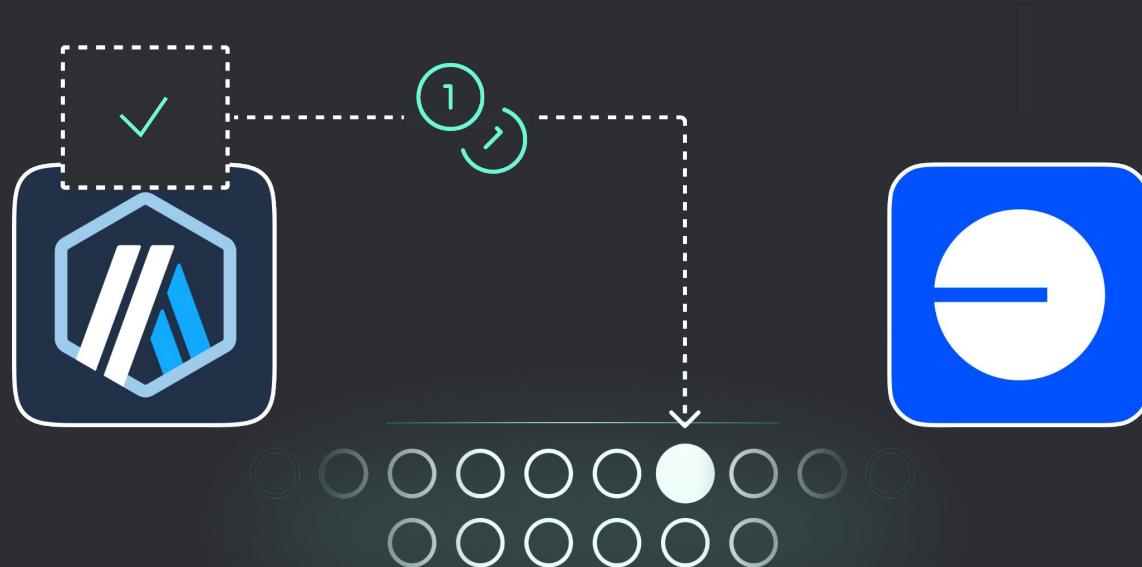
## 2. Solvers compete to fill user on Chain B



## Intents Bridge



### 3. Verify fill and release funds to solver



# X ACROSS

3s

Median Fill Time

<\$0.04

Cost

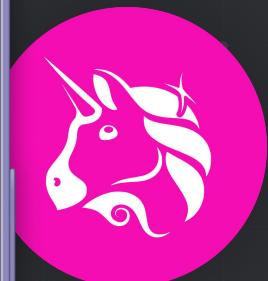
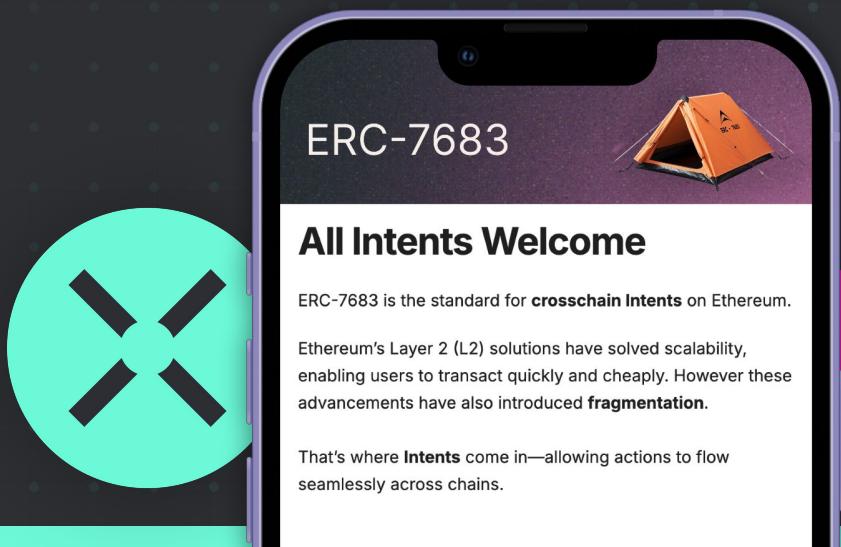
\$13B

Volume

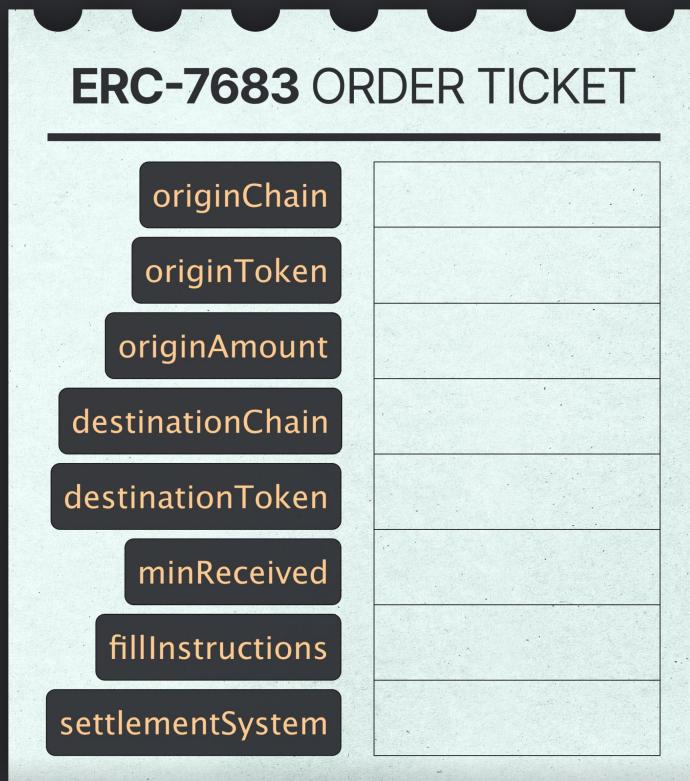
Just like there is a common form for tokens, we think there should be a common form for intents:

a standard

# ERC-7683: a standard for crosschain intents



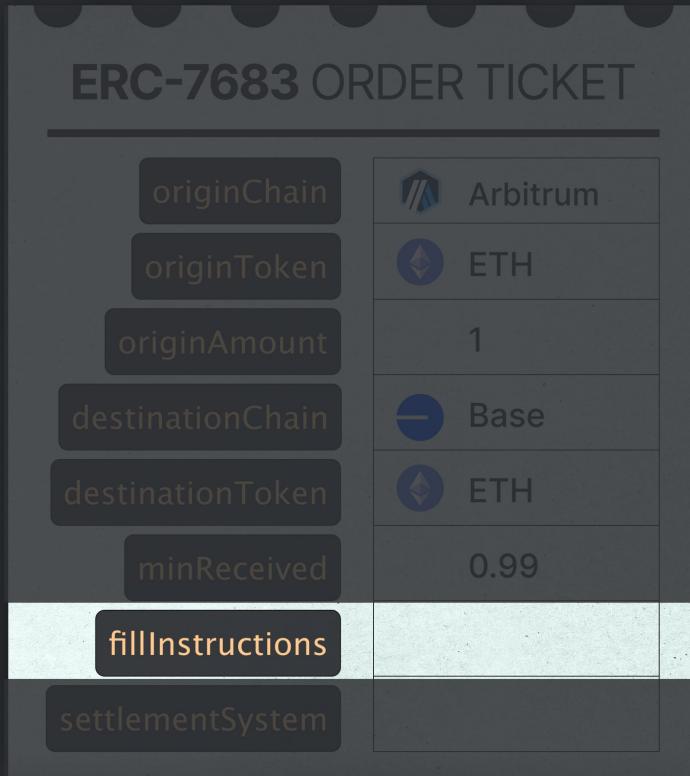
# ERC-7683 is like a order ticket



# Users inputs their “intent”... and it just “works”

ERC-7683 ORDER TICKET	
originChain	 Arbitrum
originToken	 ETH
originAmount	1
destinationChain	 Base
destinationToken	 ETH
minReceived	0.99
fillInstructions	
settlementSystem	

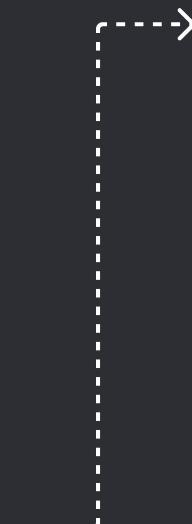
# ERC-7683 supports one-click bridge + action



Bridge 1 ETH & Swap for  
Frog Token

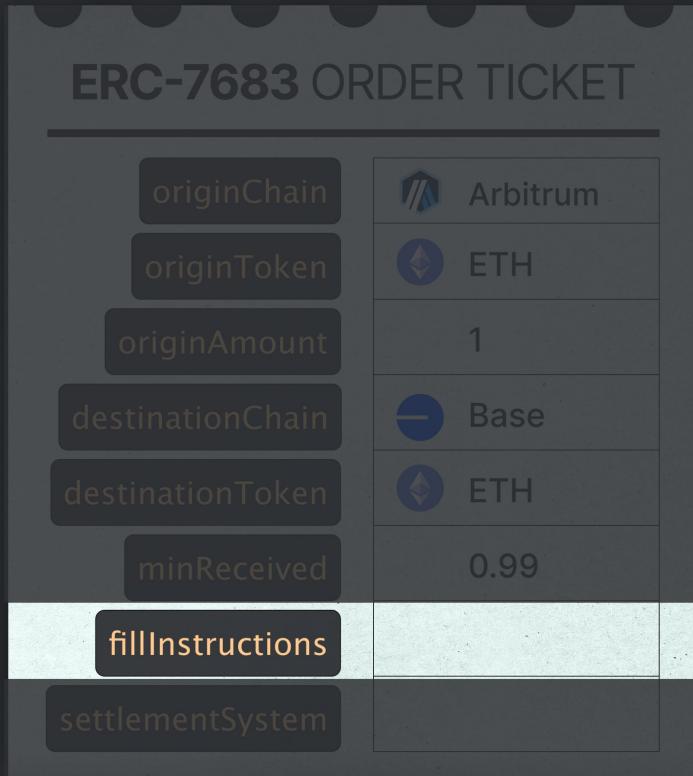
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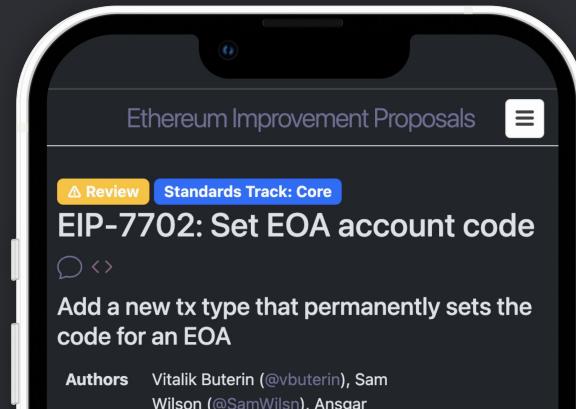
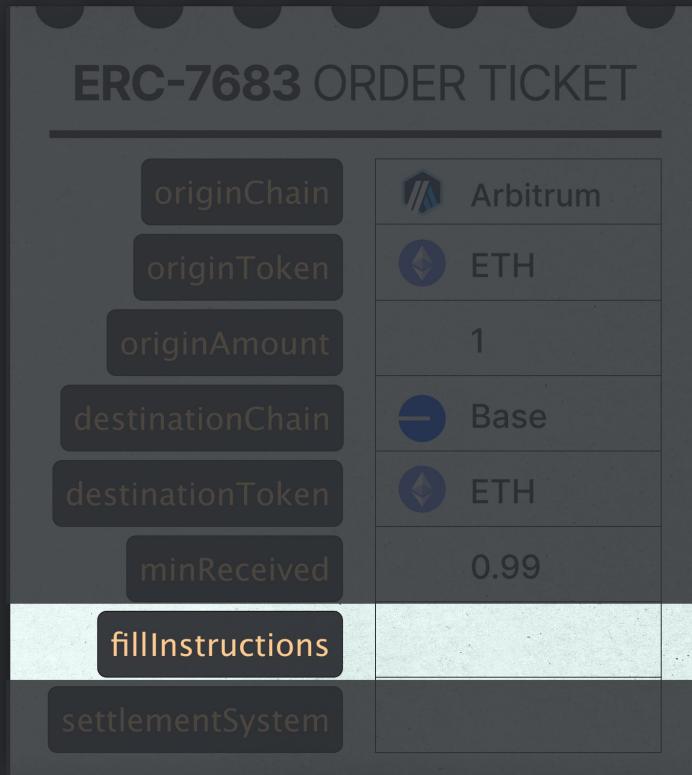
Bridge 1 ETH & Buy NFT

# ERC-7683 supports one-click bridge + action



Bridge 1 ETH & Deposit  
into Vault

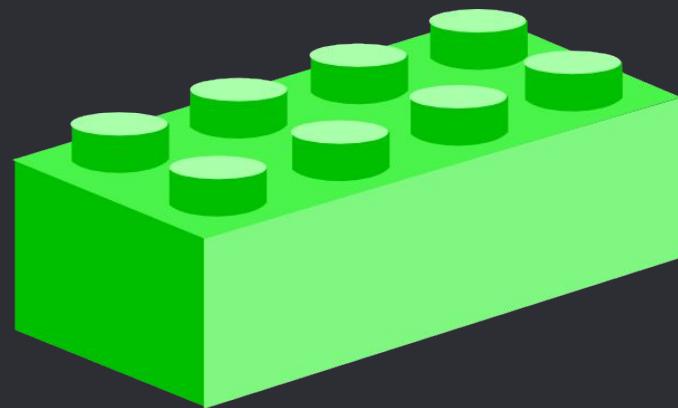
# ERC-7683 supports... any EIP-7702 message?



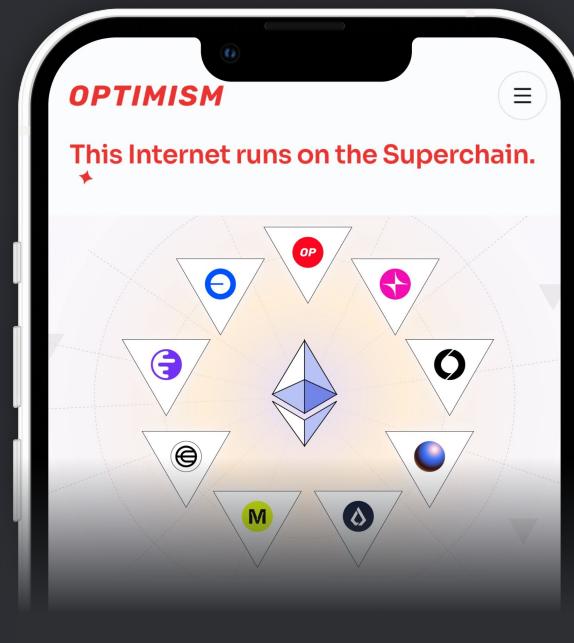
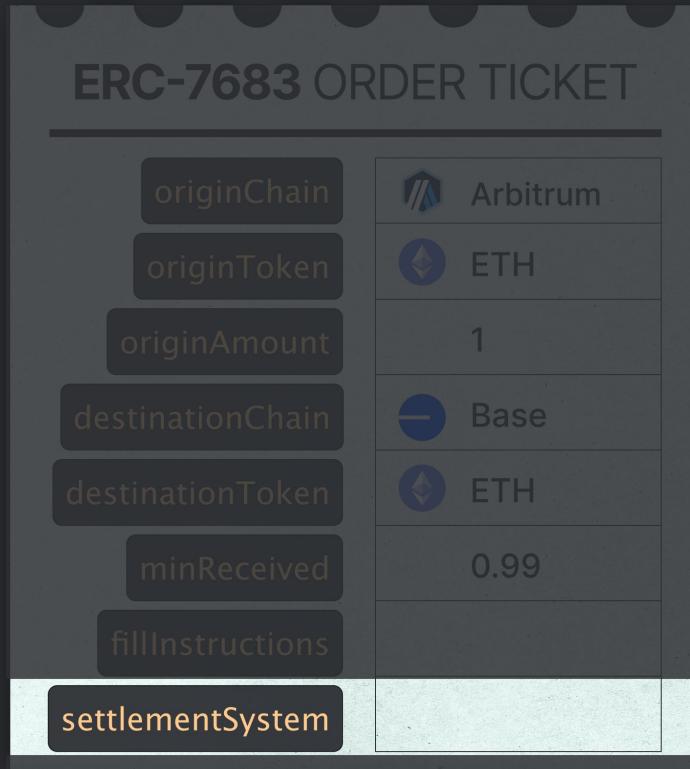
Bridge 1 ETH & Execute  
any EIP-7702 message!

# ERC-7683 modularizes “settlement” too

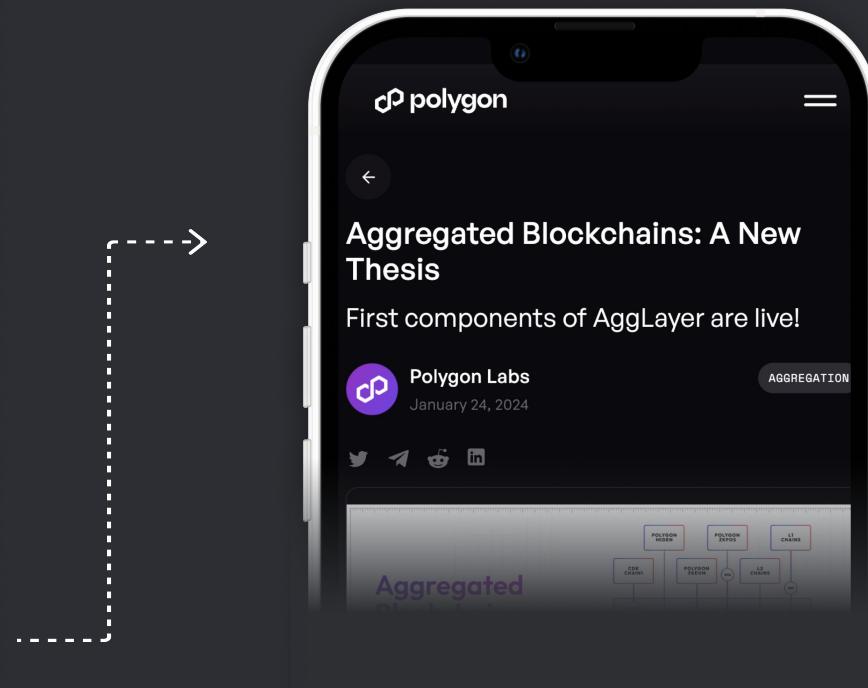
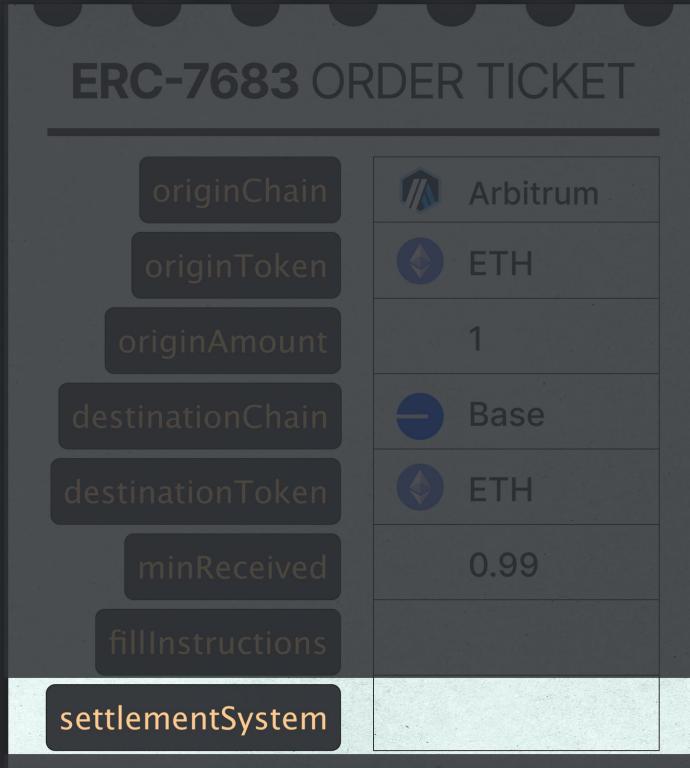
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destinationChain	Base
destinationToken	ETH
minReceived	0.99
fillInstructions	
settlementSystem	



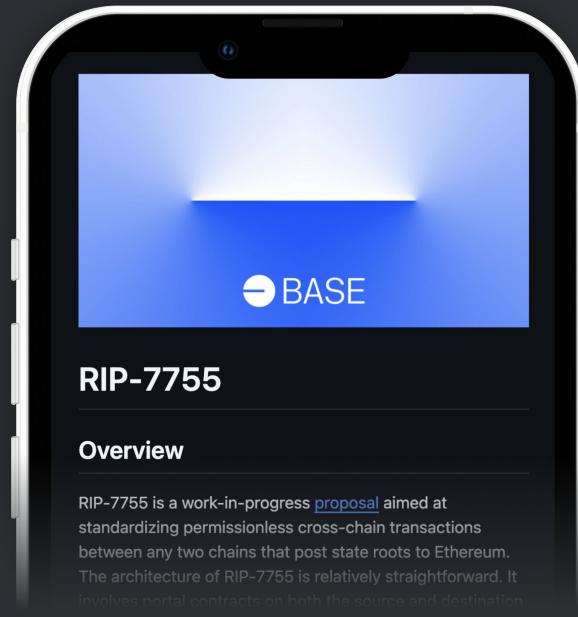
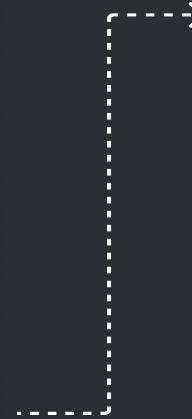
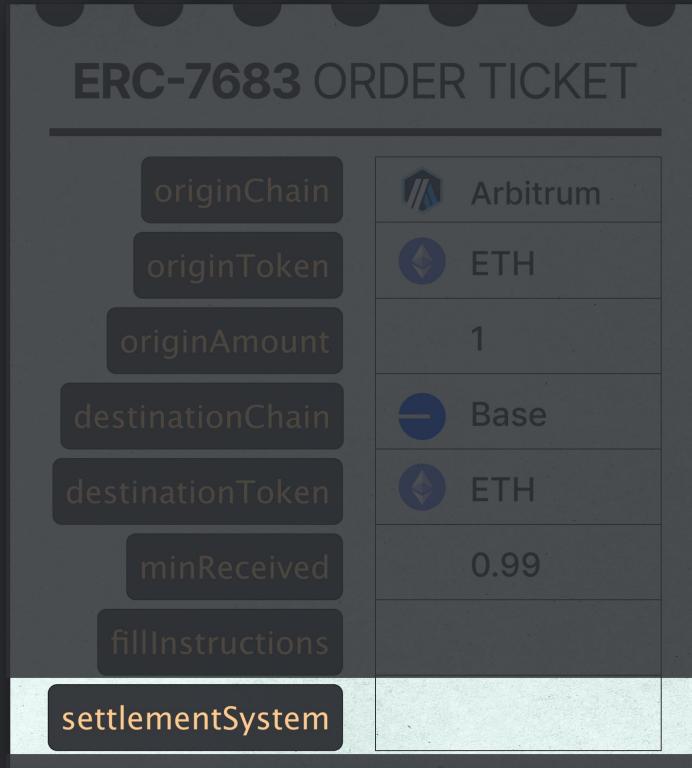
# Supports Superchain native interop



# Supports Agglayer for intent verification



# Supports RIP-7755 for “storage proofs”



# ERC-7683 supports any settlementSystem



Superchain



RIP-7755



AggLayer



Elastic Chain



Clusters



SP1



CCIP



Wormhole



Hyperlane



LayerZero

Next New  
Thing

# Why is this standard helpful?

- **For developers (both app and wallet):** ERC-7683 is a single, common format to do anything crosschain; only one integration is necessary.
- **For solvers:** ERC-7863 defines a common format for solvers to listen for without the need for custom integrations for each new protocol



ERC-7683



Optimism ✅  
@Optimism

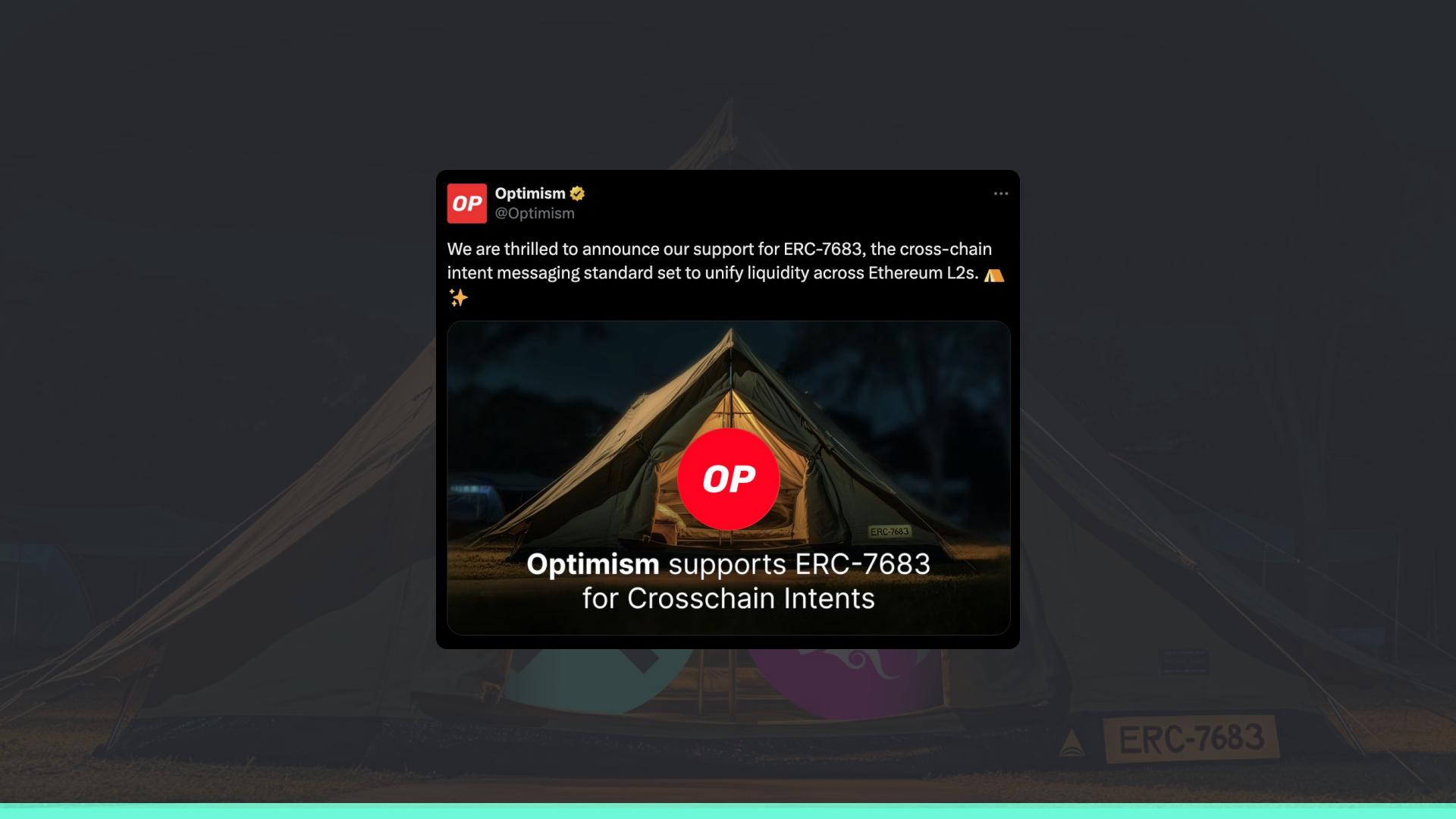
...

We are thrilled to announce our support for ERC-7683, the cross-chain intent messaging standard set to unify liquidity across Ethereum L2s. 🚘

A large red circle with the letters "OP" in white, centered over a tent entrance.

ERC-7683

**Optimism** supports ERC-7683  
for Crosschain Intents

A dark, atmospheric photograph of a campsite at night. Several tents are visible, some illuminated from within. In the foreground, a purple tent has the text "Optimism" written on it. In the background, a white sign on a wooden post reads "ERC-7683". The overall mood is mysterious and futuristic.

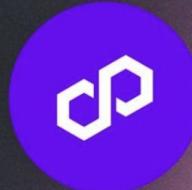


Polygon (\*,\*) ⚡  
@0xPolygon

...

Polygon PoS, Polygon zkEVM, and the AggLayer now support ERC-7683, bringing enhanced interoperability and UX to Ethereum's multichain world.

Get ready for faster transactions & deeper liquidity across L2s ⚡



Polygon supports ERC-7683

ERC-7683



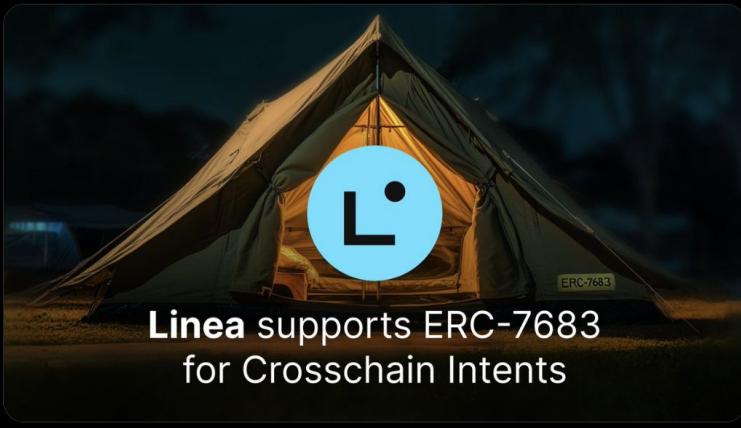
Linea



@LineaBuild

...

We will support ERC-7683, the cross-chain messaging standard for intent-based systems This will solve liquidity fragmentation—a massive leap towards seamless Ethereum L2 scaling.





Alchemy  
@AlchemyPlatform

...

We will support ERC-7683, the cross-chain messaging standard for intent based systems 🚀 This will solve liquidity fragmentation — a massive leap towards seamless Ethereum L2 scaling.



ERC-7683

**Alchemy** supports ERC-7683  
for Crosschain Intents

ERC-7683



Blast

@blast

...

#### ANNOUNCEMENT:

Blast will support ERC-7683: the cross-chain intent messaging standard to unify liquidity across Ethereum L2s.



ERC-7683



Conduit ✨  
@conduitxyz

...

We're happy to share that we will support ERC-7683, the cross-chain intent messaging standard, to unify liquidity across Ethereum L2s

Conduit supports ERC-7683  
for Crosschain Intents

ERC-7683



Manta Network (⚡,⚡) Meme-ta Szn ⚡  
@MantaNetwork

...

⚡ We're thrilled to announce that #MantaPacific, the largest modular L2, will support ERC-7683, the cross-chain intent messaging standard, to seamlessly unify liquidity across Ethereum L2s! 🚀



ERC-7683



growthepie.xyz 🎉 🎉  
@growthepie\_eth

...

As part of growthepie's onchain governance - we will be supporting ERC-7683.

ERC-7683 is the cross-chain messaging standard for intent based systems 🚀 This will solve liquidity fragmentation.

This is a massive leap towards seamless Ethereum L2 scaling.



ERC-7683



Mantle ⚡  
@0xMantle

...

Mantle is thrilled to support ERC-7683, the cross-chain messaging standard for intent based systems.

⚠ This will solve liquidity fragmentation — a massive leap towards seamless Ethereum L2 scaling.



**Mantle** supports ERC-7683  
for Crosschain Intents

ERC-7683



Mode ● ✅  
@modenetwork

...

We are excited to announce that Mode will support ERC-7683, the cross-chain intent messaging standard, to unify liquidity across Ethereum L2s.



Mode supports ERC-7683

ERC-7683



Taiko 🍒 ✅  
@taikoxyz

...

We are excited to announce that we will support ERC-7683, the cross-chain messaging standard for intent based systems. 🚀

This will solve liquidity fragmentation — a massive leap towards seamless Ethereum L2 scaling.



**Taiko** supports ERC-7683  
for Crosschain Intents

ERC-7683



**Superseed** ⚙  
@SuperseedXYZ

...

Superseed will support ERC-7683, the cross-chain messaging standard  
for intent based systems! 🚨

This will solve liquidity fragmentation—a massive leap towards seamless  
Ethereum L2 scaling.



ERC-7683





Koni Stack | 🎉 Devcon 🎉 ✅  
@konistack

...

We are excited to announce that we will support ERC-7683, the cross-chain messaging standard for intent-based systems created by  
@AcrossProtocol & @Uniswap 🚀

Koni Stack will include ERC-7683 into our SDK to empower developers to create dApps with seamless UX and easier cross-chain interactions from just a single deployment. This advancement will attract more users through simplified interactions and enhanced interoperability 💫



**Koni Stack** supports ERC-7683  
for Crosschain Intents

ERC-7683



Scroll   
@Scroll\_ZKP

...

We're excited to announce that Scroll will support ERC-7683, the cross-chain intent messaging standard, enhancing interoperability across Ethereum's multichain ecosystem.

Get ready for a more connected onchain world with Scroll and  
[@AcrossProtocol!](#) 



**Scroll** supports ERC-7683

ERC-7683



Nethermind ⚙  
@NethermindEth

...

We are excited to announce that Nethermind will support ERC-7683, the cross-chain intent messaging standard, to unify liquidity and interoperability across #Ethereum Layer 2 solutions.

This support is a natural extension of our ongoing efforts with Superchain/OP-Stack and Taiko to accelerate Ethereum's scalability and usability.



ERC-7683



AltLayer ✅  
@alt\_layer

...

We're excited to join forces with [@uniswap](#) [@AcrossProtocol](#) to support ERC-7683, which provides instant interoperability and an awesome user experience on [@ethereum](#).

Let's unify L2s together! 🚀



AltLayer supports ERC-7683

ERC-7683



aori @aori\_io

...

We are excited to announce that we will support ERC-7683, the cross-chain intent messaging standard, to unify liquidity across Ethereum L2s. This is to help further the ecosystem-wide mission to create more universal interoperability.





Fluent ✅  
@fluentxyz

...

Fluent will support ERC-7683, the cross-chain intent messaging standard created by [@AcrossProtocol](#) and [@Uniswap](#).

Fluent keeps making it easier for devs to build what they want and give users an experience that just works.



**Fluent** supports ERC-7683

ERC-7683



SubWallet ⚡️  
@subwalletapp

...

It's official! SubWallet will support ERC-7683, the cross-chain intent messaging standard created by [@AcrossProtocol](#) & [@Uniswap](#), to bring instant interoperability to [@ethereum](#) L2s and sidechains 🚀

This support will significantly enhance UX and eliminate fragmentation for users when performing cross-chain transactions 😊 No more hassling through complicated protocols and bridges; just input your intent and leave the rest to us 💪



SubWallet supports ERC-7683  
for Crosschain Intents

ERC-7683



**OpenSocial Protocol** ⚙  
@OpenSocialLabs

...

Excited to support ERC-7683, @AcrossProtocol's cross-chain intent messaging standard, to unify transactions across Ethereum L2s!

A MASSIVE leap towards seamless L2 scaling: say goodbye to social data fragmentation, your community bonds do not have to be limited to a chain ❤️



**OpenSocial** supports ERC-7683



**ERC-7683**



ZeroDev ✅  
@zerodev\_app

...

ZeroDev is excited to join forces with @AcrossProtocol and @Uniswap to push interoperable intents aka ERC-7683 🚀

ERC-7683 will power our upcoming launch of chain-abstacted balance (CAB). Stay tuned!



**ZeroDev** supports ERC-7683  
for Crosschain Intents

ERC-7683



Rhinestone ✨  
@rhinestonetf

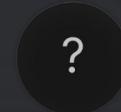
...

We're excited to announce that Rhinestone is joining forces with  
@AcrossProtocol and @Uniswap by supporting ERC-7683.

Modular Smart Accounts ✨ (ERC-7579) and intent-based systems 🏜 will be foundational to solving Ethereum's fragmented user experience



ERC-7683



ERC-7683



ERC-7683

# What's next for ERC-7683?

- **ERC-7683 now has broad support:** All the major L2 ecosystem—Arbitrum, Optimism, Polygon, ZKSync—and over 25 other projects support the standard!
- **Now we need better dapp/wallet UX patterns:** We now need to build easy integration patterns for dapps + wallets.
- **Full integration with EIP-7702:** The Petra hardfork will make smart accounts ubiquitous; this will allow for seamless chain abstraction everywhere—creating a unified Ethereum experience.

# Unify Ethereum

# X ACROSS



Twitter @hal2001