User Facing Intents with Permissions

Nitya Subramanian, Capsule

Intents Day
August 2023

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How Capsule thinks about on-chain interaction

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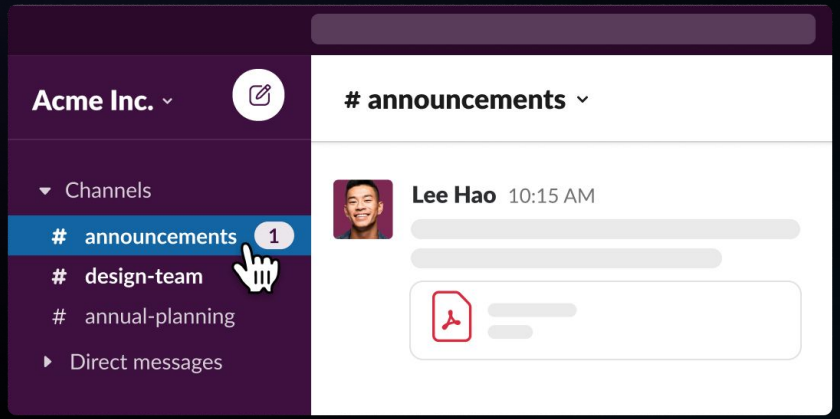
Here we go again



Web2 Assumptions

- Autonomous
- Programmable
- Fuzzy Specification

(aka trust assumptions)

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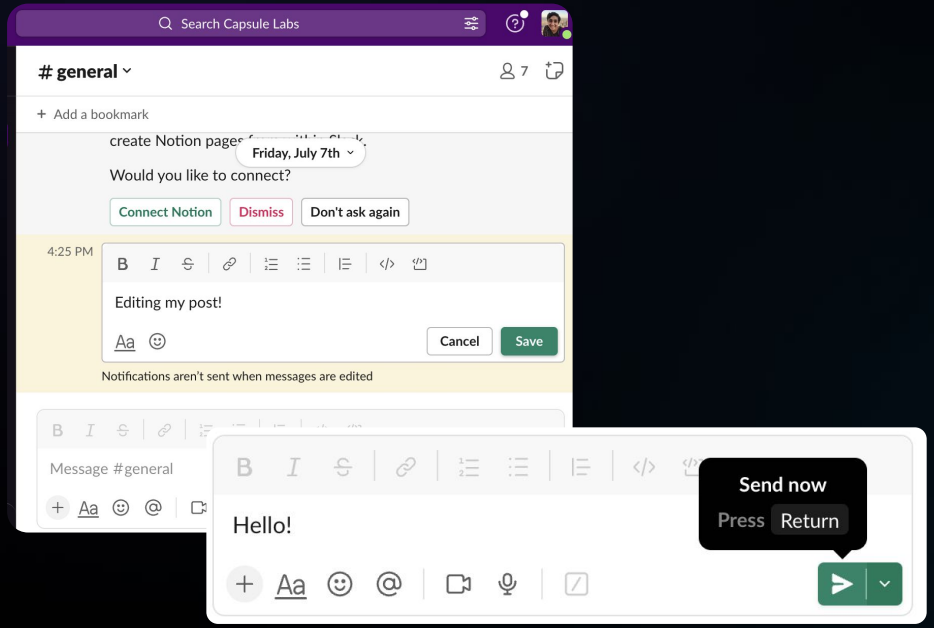
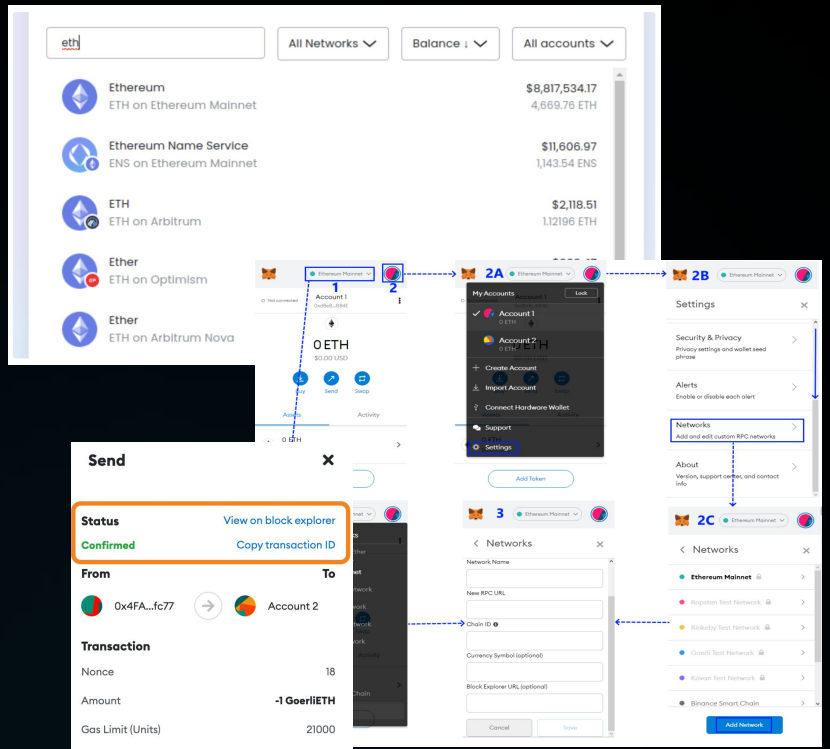
How Transactions Fit In





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Apps

Wallets

Chains

App Interaction

Desire for action

Construct Transaction

Sign Transaction

Execute & Settle

Crypto Today

Capsule

Apps

Wallets

Chains

App Interaction

Desire for action

Construct Transaction

Sign Transaction

Verify Logic

Execute & Settle

Account Abstraction

Capsule

Wallets are doing too much

	Core Responsibilities
User Interfaces	Everything before an app is wallet aware
Authentication	Ownership attestation for address(es) that will sign transactions
Transaction Formation	What contract? What parameters? How much gas will I pay?
Transaction Verification	Is this safe? Is this what I'm meant to do?
Transaction Signing	I approve ✅
Node Infrastructure	Submit a transaction to the chain

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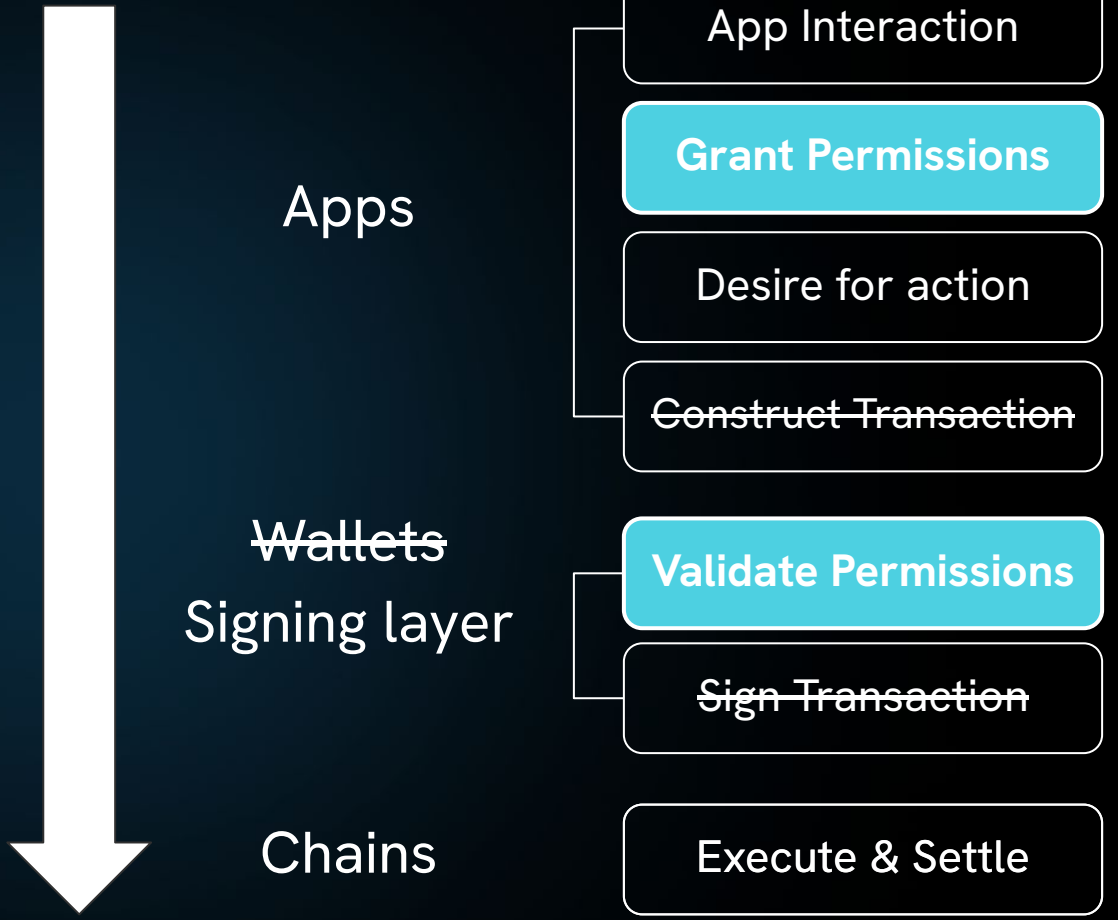
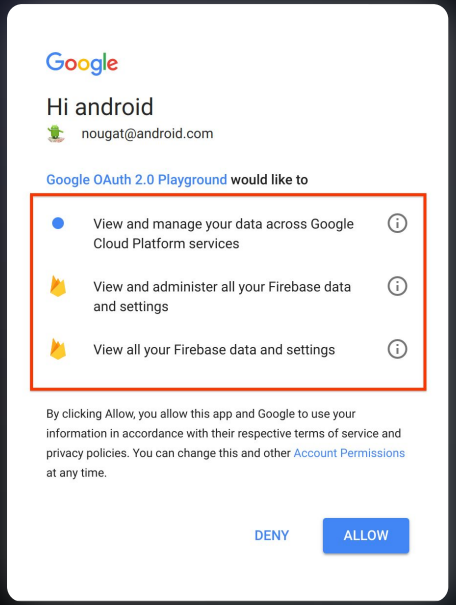
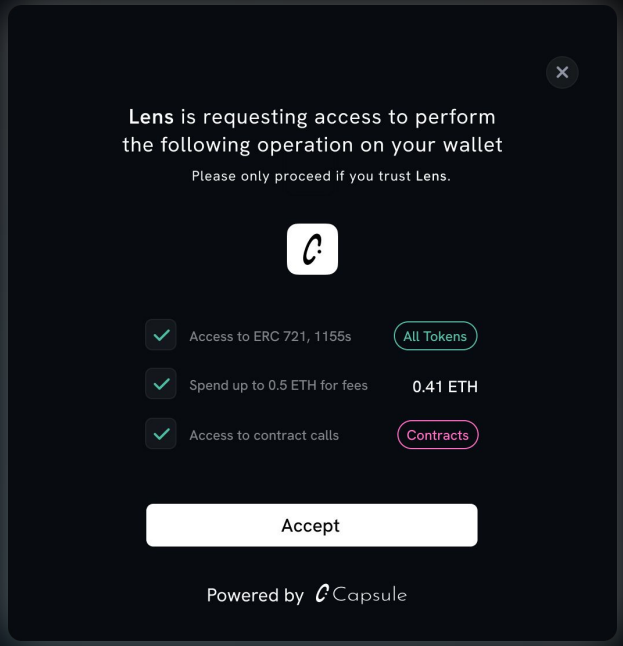


Capsule Interaction Model

Capsule

Permissions for tx specification





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Capsule Marketplace Explore My Items

Connect

What is Connect?

A New Way to Log In
Create a Capsule wallet and login. Click the button to get started.

4:59

Explore and collect art NFTs

Digital marketplace for crypto collectibles and non-fungible tokens (NFTs). Buy, Sell, and discover exclusive digital assets.

Explore Mint now

Collected and Featured NFTs

NFTs on several different markets across popular networks.

Top Collections over Last 7 days

Arbitrum Ethereum Base

1		19,769.39	+26.52%
2		2,769.39	+10.52%
3		2,769.39	+10.52%

Discussion:
Questions we're thinking about

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Discuss: Mapping Intent <> Transaction(s)

How do you enforce what is valid and what isn't from the perspective of a solver?

How can a user verify that their intent has been correctly (ideally optimally) solved?

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Discuss: Upgradeability

The ability for valid “intent solutions” to quickly change is a feature- how are those changes best reflected

- AA → Smart Contract Upgrades (how do you scale cost?)
- Offchain → how do you have a contract b/w users, app interfaces, and solvers on what solutions are valid to a user intent?

Eg: A new swap contract gets created. Who needs to know?

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Discuss: Wallets

What are the features of a wallet in a post- intents paradigm?

Are standalone wallets necessary at all vs apps directly?

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