

Intents: Past, Present, Future

**Christopher Goes
Inaugural Intents Day!**

A brief etymological & conceptual history

Past I [Mar '09 and earlier]

A commitment folk theorem [☆]

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ABSTRACT

Real world players often increase their payoffs by voluntarily committing to play a fixed strategy, prior to the start of a strategic game. In fact, the players may further benefit from commitments that are conditional on the commitments of others.

This paper proposes a model of conditional commitments that unifies earlier models while avoiding circularities that often arise in such models.

A commitment folk theorem shows that the potential of voluntary conditional commitments is essentially unlimited. All feasible and individually rational payoffs of a two-person strategic game can be attained at the equilibria of one (universal) commitment game that uses simple commitment devices. The commitments are voluntary in the sense that each player maintains the option of playing the game without commitment, as originally defined.

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Past II [Feb '18]

The Wyvern Protocol is an Ethereum framework for the exchange of nonfungible digital assets. Protocol users - human-operated Ethereum accounts or other Ethereum smart contracts - place orders expressing the intent to sell or buy a particular asset or any asset with certain characteristics. The protocol's job is to match buyer and seller intent on-chain such that the asset transfer and payment happen atomically. The protocol functions solely as a settlement layer - orderbook storage and matching algorithms are left to off-chain infrastructure.

The protocol is representation-agnostic: it supports any asset that can be represented on the Ethereum chain (i.e., transferred in an Ethereum transaction or in a sequence of transactions). Users will be able to buy and sell anything from CryptoKitties to ENS names to smart contracts themselves. The protocol “knows nothing” about asset representations - instead, buyer and seller intents are specified as functions over the space of Ethereum transactions, as follows:

Past III [Mar '19]

Ethereum is game-changing technology, literally.



Virgil Griffith · Follow
6 min read · Mar 29, 2019



3.9K



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People often ask, “[What is Ethereum for?](#)”. Previous answers to this question often included the term “world computer”, [but despite some interesting examples](#), it’s been difficult to answer this question at a more abstract level. I propose an answer to this question. I hereby propose,

Ethereum is an unprecedented arena for playing cooperative games.

And moreover,

Ethereum enables powerful economic vehicles we don’t yet understand.

Top highlight

[Non-cooperative game theory](#), the original and most widely used branch of game theory, assumes the *absence of an external authority to enforce rules*. Fundamentally, I claim that the Ethereum ledger constitutes an **incorruptible, omnipresent, external overseer** that no matter the game is *always* available to enforce agreements among players. This implies that Ethereum, in theory, could turn *any* non-cooperative game into a cooperative game (sometimes called a [coalitional game](#)).

The transmogrification from non-cooperative to cooperative games is achieved by a technique we term *Game Warping* defined as using **transparent, triggerable, unstoppable burns and on-chain side-payments** to move game-theoretic equilibria or to create new player actions. Game Warping stacks as a new layer atop an uncooperative game to make cooperation the Rational choice.

Mail him:
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Past IV [Aug '22]

2 Architectural design philosophy

Anoma's architecture is driven by two design principles: first, intent-centricity; second, a homogeneous protocol architecture with a heterogeneous security model. Beyond these two design principles, all other architectural choices are a matter of modularisation and runtime configuration parameters.

2.1 Intent-centricity

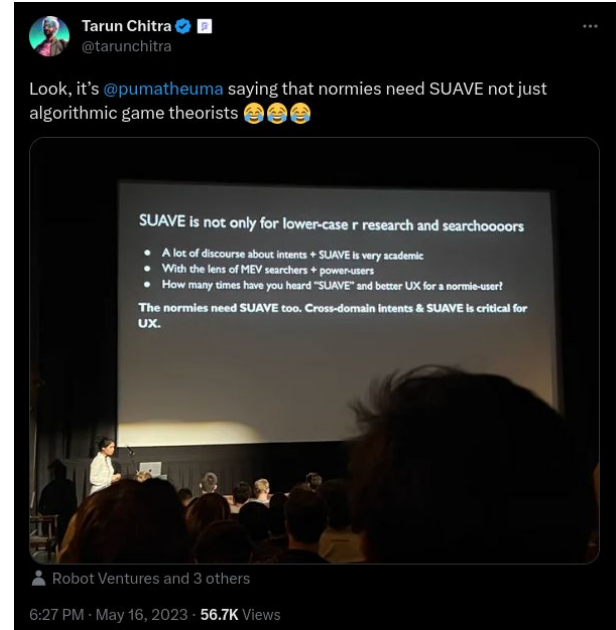
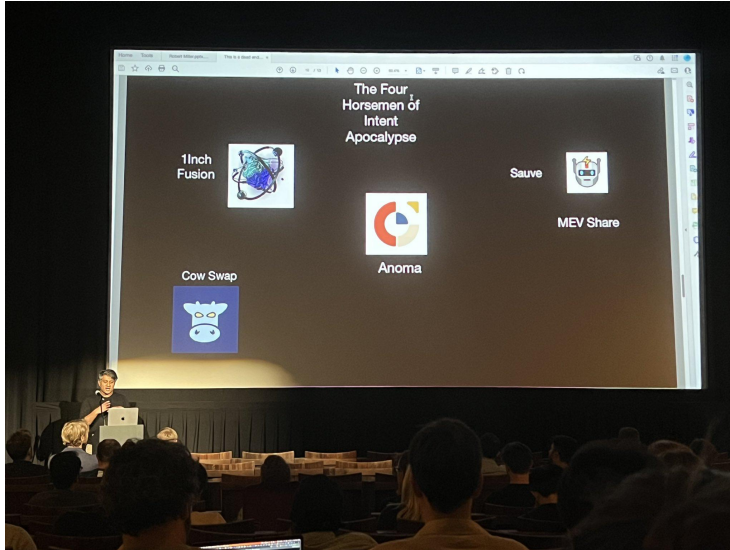
An *intent* is an expression of what a user wants to achieve whenever they interact with a protocol, for instance “transfer X from A to B” or “trade X for Y”. Practically, an intent is an off-chain signed message that encodes which state transitions a user wants to achieve. Unlike transactions, intents are partial, so one can think of intents as parts of transactions that require other direct or indirect parts as complements in order to form a final balanced transaction which satisfies all users' constraints.

Existing protocols are designed with *transactions* as their most fundamental unit. Anoma takes a radically different approach: the architecture of Anoma is centred around programmatic *intents*.

Past V [Aug '22 - May '23]

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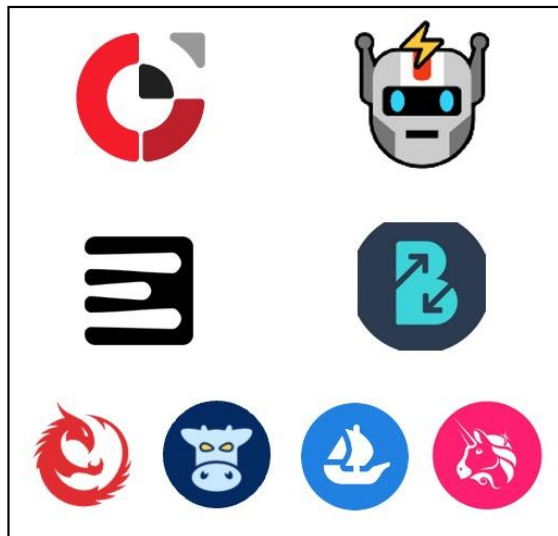
Past VI [May '23]



Present

Present I

Intent-centric architectures & applications in **2023**



Intent-centric architectures & applications in **2024**

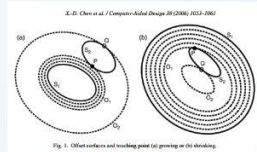


Present II

STOP DOING INTENTS

- Human Desires were never meant to be formalized as multi-dimensional preference surfaces
- YEARS OF META TXNS yet NO REAL-WORLD USE FOUND for INTENTS beyond LIMIT ORDERS
- Wanted to GET BEST EXECUTION ? We had a tool for that: It was called **DECLARATIVE PROGRAMMING**
- “Yes please solve
$$\begin{cases} f_1(x,y,z) = 0, \\ \rho^2 f_{x_i}(x f_{x_i} - z f_{z_i}) + \rho^2 f_{y_j}(y f_{y_j} - x f_{x_j}) \\ + \rho^2 f_{z_k}(z f_{z_k} - y f_{y_k}) = 0, \\ (x f_{x_i} - y f_{y_j})^2 f_{z_k}^2 - \rho^2 f_{z_k}^2 + \rho^2 f_{z_k}^2 \\ - (\rho^2 - \rho^2) f_{z_k}^2 f_{z_k} = 0. \end{cases}$$
 w/ 100 others in FHE for my ShibaSonicInu” - Statements dreamed up by evil wizards

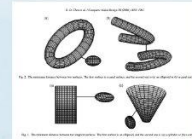
LOOK at what **BIG INTENT** have been demanding your Respect for all this time, with all the invariants & slippage we built for them (This is REAL INTENT, done by REAL INTENTIONS):



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“Hello I would like AN INTENT TO NOT BE FRONT RUN”

imgflip.com They have played us for absolute fools

Future

Future $I-\infty$

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