

Introduction to CASA

(Lightning-Edition, 17Sept 2023)

C-Base / Berlin Eth Meetup

Basic Actor Model of most “crypto” systems

Wallet

→ the “User Agent” of dPKI systems

dApp

→ website, potentially outside of HTTP/DNS...

Node

→ clients running “core protocols”: consensus, pruning, etc

Contracts

→ script-automata, incl. “Oracles”, registries, etc

State

→ data availability and governance

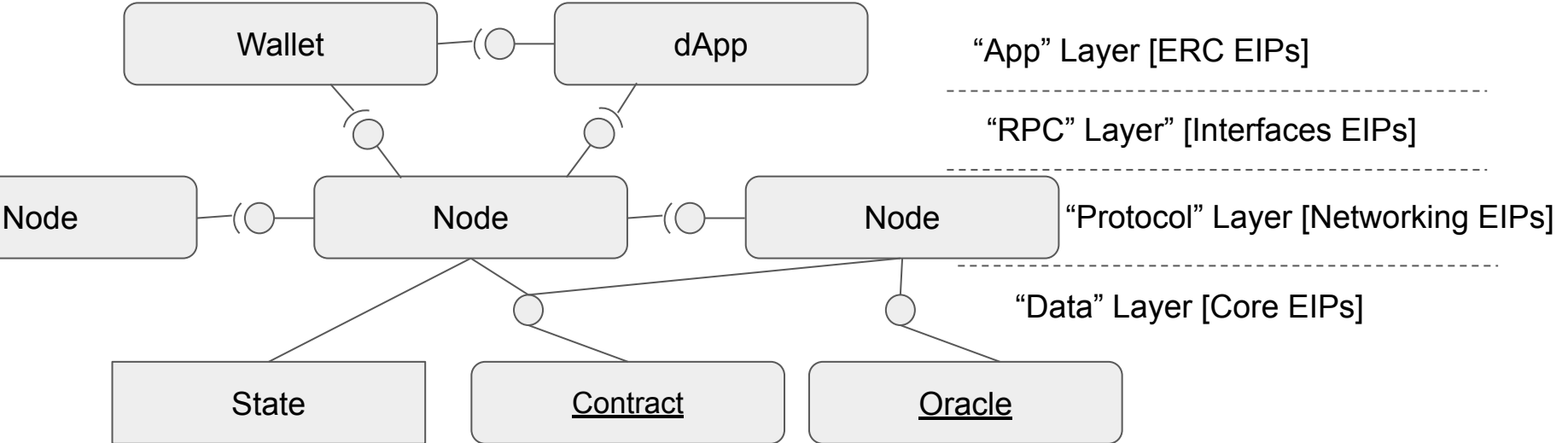


vitalik.eth
@VitalikButerin

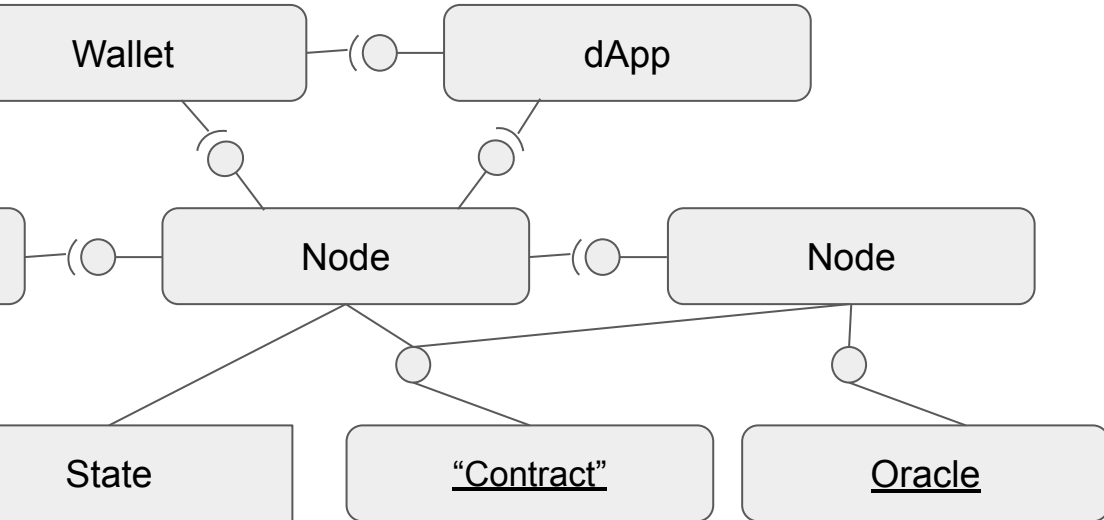
To be clear, at this point I quite regret adopting the term “smart contracts”. I should have called them something more boring and technical, perhaps something like “persistent scripts”.

7:21 PM · Oct 13, 2018

Basic Layering Model of most “crypto” systems



Complications, both common and particular:



Technological

- Browser-centricity (W3C)
- Economics of Networking (IETF)
- Interop with “real world” computing
- Emergent spam/fraud problems and post-factum mitigations thereof
- Networking and compute arms races

Political-Economic

- Governance and collusion
- Venture-funding and zero-sum incentives
- Liability (and jurisdiction) of each individual or corporate actor
- Culture of “standardize after PMF”

OK, but what's “Chain Agnostic” mean?

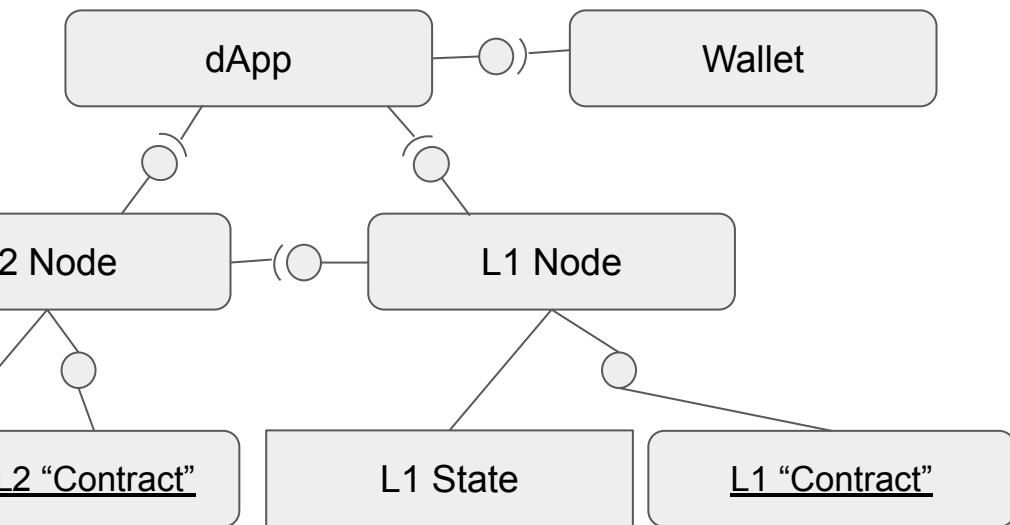
1. Avoid Maxi Derangement Syndrome
2. Avoid centralization and lock-in, *even at the level of L1/system choice*
3. Abstract out a *style* of development from the stacks and implementation choices of each chain-system

What CASA strives to document and specify:

4. Information-sharing and specification that helps all developers, not commercial strategies
5. Maximally generic CAIPs - per-chain-system specifics profiled in “namespaces”
6. Decentralization beyond crypto systems, like AuthZ (CACAO, UCAN) and data plumbing

Cross-chain development (e.g. Cosmos, Polkadot, EVM)

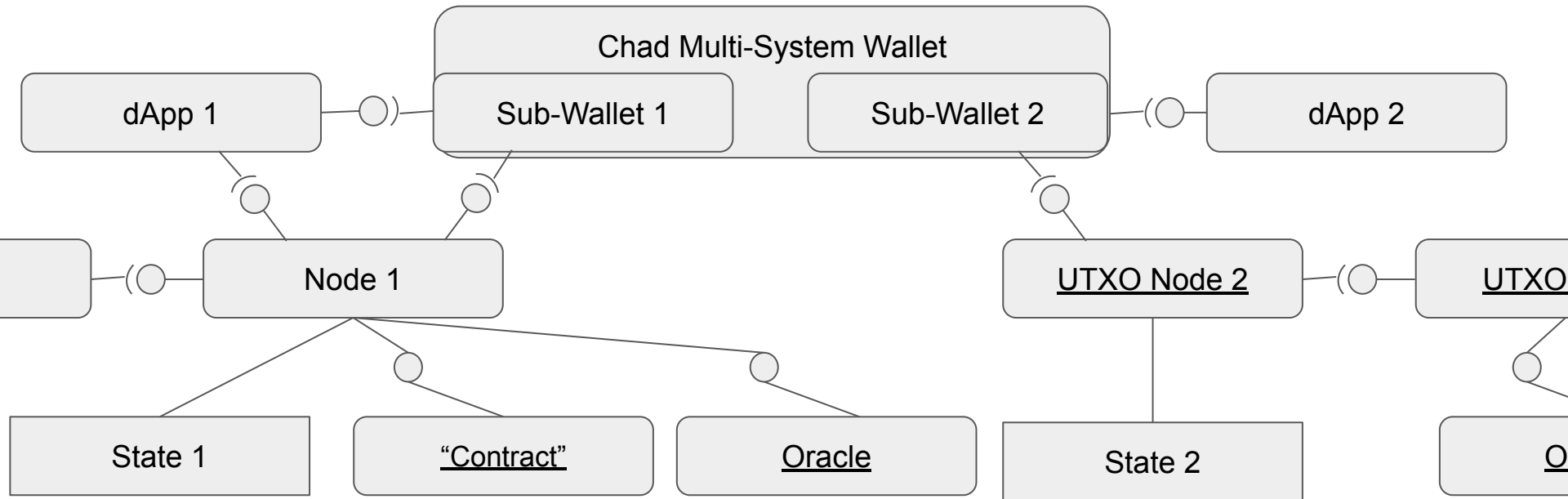
You do not need CASA for this kind of cross-chain work



- Ways in which L2s can define custom nodes, interfaces, RPC calls, etc governed by **one** system's core protocols
- Lots of audited and open-source prior art just waiting to be forked
- Blockchain Foundations (loyal to and often funded from) core protocols have educational and financing infra to help

Cross-***system*** development via CAIPs+“namespaces”

This is what CASA was founded to support... as a neutral public good



How to contribute

- Primarily github-based, primarily CC-0 licensed, but flexible on implementation details
 - Review, discussion, issues, etc. are always welcome
- Primary native outputs:
 - RFC-like documents
 - **Non-commercial** conferences and working groups, including walletuncon.org in Istanbul '23
 - Sometimes OS tooling and specs
- Mainstreaming: EIP process, IETF/W3C processes, and some day more
- Periodic public calls are listed on [our hooli calendar](#)
(also available in [unauthenticated form](#) for the hooli-boycottors)