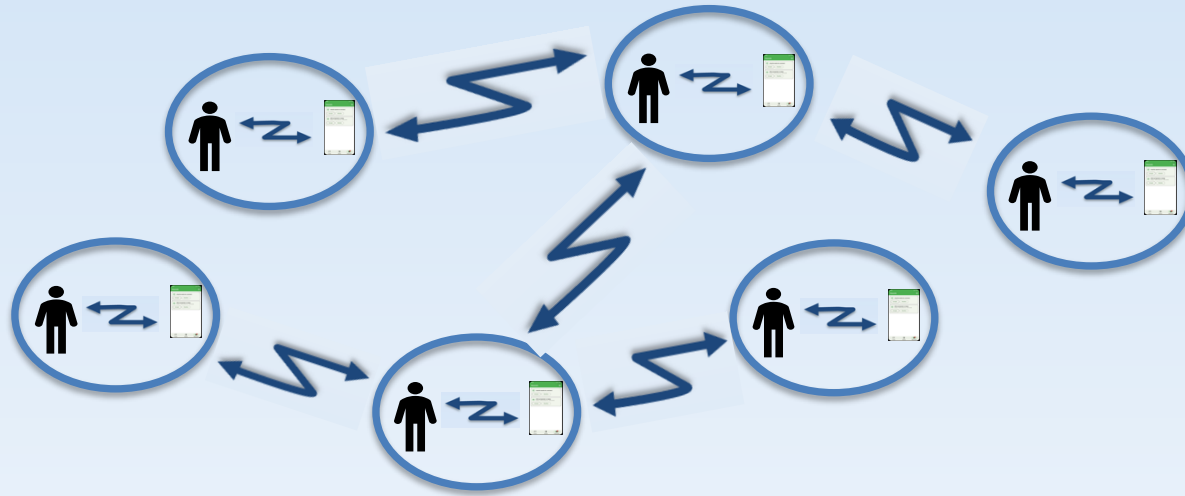


Grassroots Wrap-up



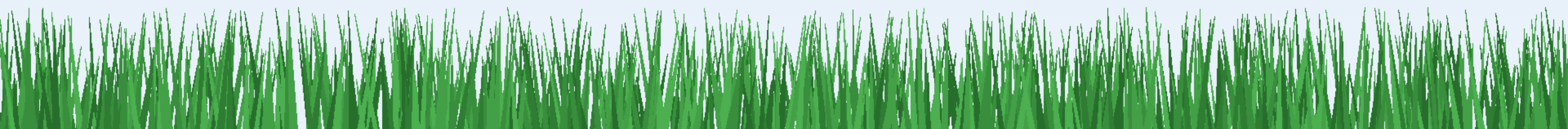
Grassroots — Why and What?

- An egalitarian & democratic alternative to global platforms (Facebook, X, Uber, Airbnb, Bitcoin, Ethereum, Amazon Marketplace,...)

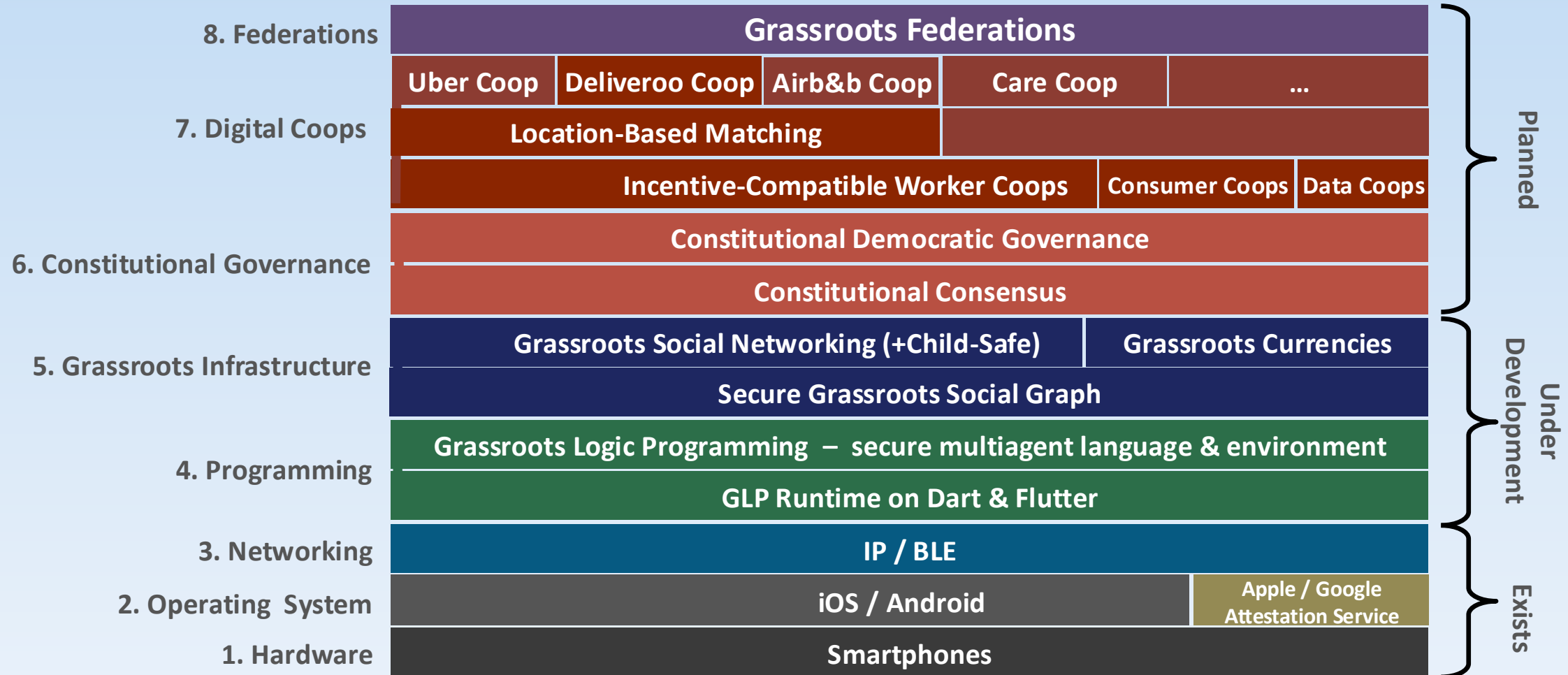


Grassroots — Why and What?

- An egalitarian & democratic alternative to global platforms (Facebook, X, Uber, Airbnb, Bitcoin, Ethereum, Amazon Marketplace,...)
- How would a grassroots digital realm look like?

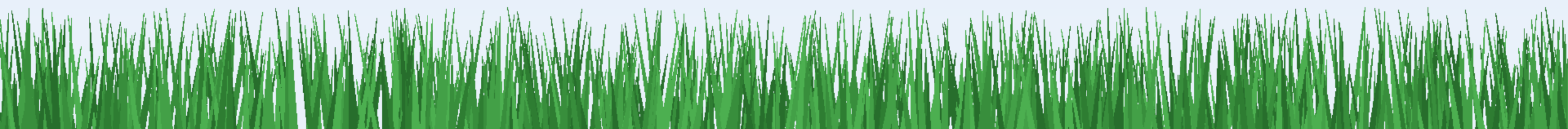


The Grassroots Stack



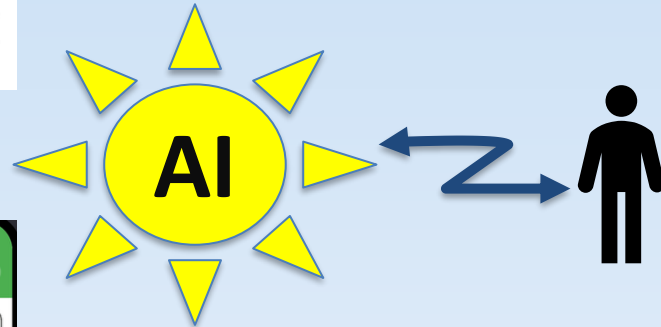
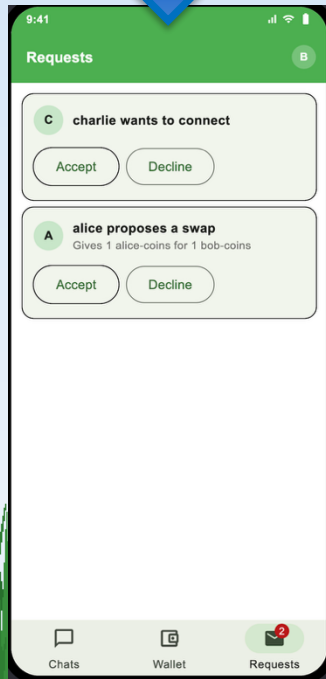
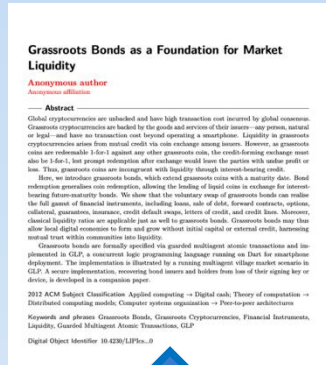
Grassroots — Why and What?

- An egalitarian & democratic alternative to global platforms (Facebook, X, Uber, Airbnb, Bitcoin, Ethereum, Amazon Marketplace,...)
- How would a grassroots digital realm look like?
- How will it be built?



Building Grassroots Theory and Implementation with AI

Scientific paper describing a grassroots platform



Smartphone App realizing the grassroots platform

Grassroots paper are on the arXiv

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1. [arXiv:2607.02304](#) [pdf, ps, other] [cs.DC](#) [cs.CR](#) [cs.MA](#)

Securing People and their Machines Against Major Faults

Authors: [Ohad Eitan](#), [Idit Keidar](#), [Ehud Shapiro](#)

Abstract: We consider grassroots platforms -- distributed systems of agents consisting of people identified by self-chosen public keys and their machines (smartphones) -- and wish to make them secure against \emph{major faults}: the loss of their private keys and/or their smartphones. As grassroots platforms have no global resource to rely on for recovery, our peer-based solution is based on: (1) \emph{a... [More](#)

Submitted 2 July, 2026; **originally announced** July 2026.

2. [arXiv:2606.19263](#) [pdf, ps, other] [cs.SI](#) [cs.CY](#) [cs.MA](#) [econ.GN](#)

Digital Speech Acts Retain Control of Copyright with People, Not Platforms

Authors: [James Golike](#), [Ehud Shapiro](#)

Abstract: Legal precedents protect computer code as copyrightable expression. They have enabled centralized digital platforms -- operating from corporate servers that hold all user data -- to construct private governance regimes through the interaction of copyright, contract, and technical architecture: people who create virtually all platform value must surrender effective copyright control through Terms o... [More](#)

Submitted 27 June, 2026; **v1** submitted 17 June, 2026; **originally announced** June 2026.

3. [arXiv:2605.13362](#) [pdf, ps, other] [cs.MA](#) [cs.AI](#) [cs.DC](#) [cs.GT](#) [econ.TH](#)

Constitutional Governance in Metric Spaces

Authors: [Ehud Shapiro](#), [Nimrod Talmon](#)

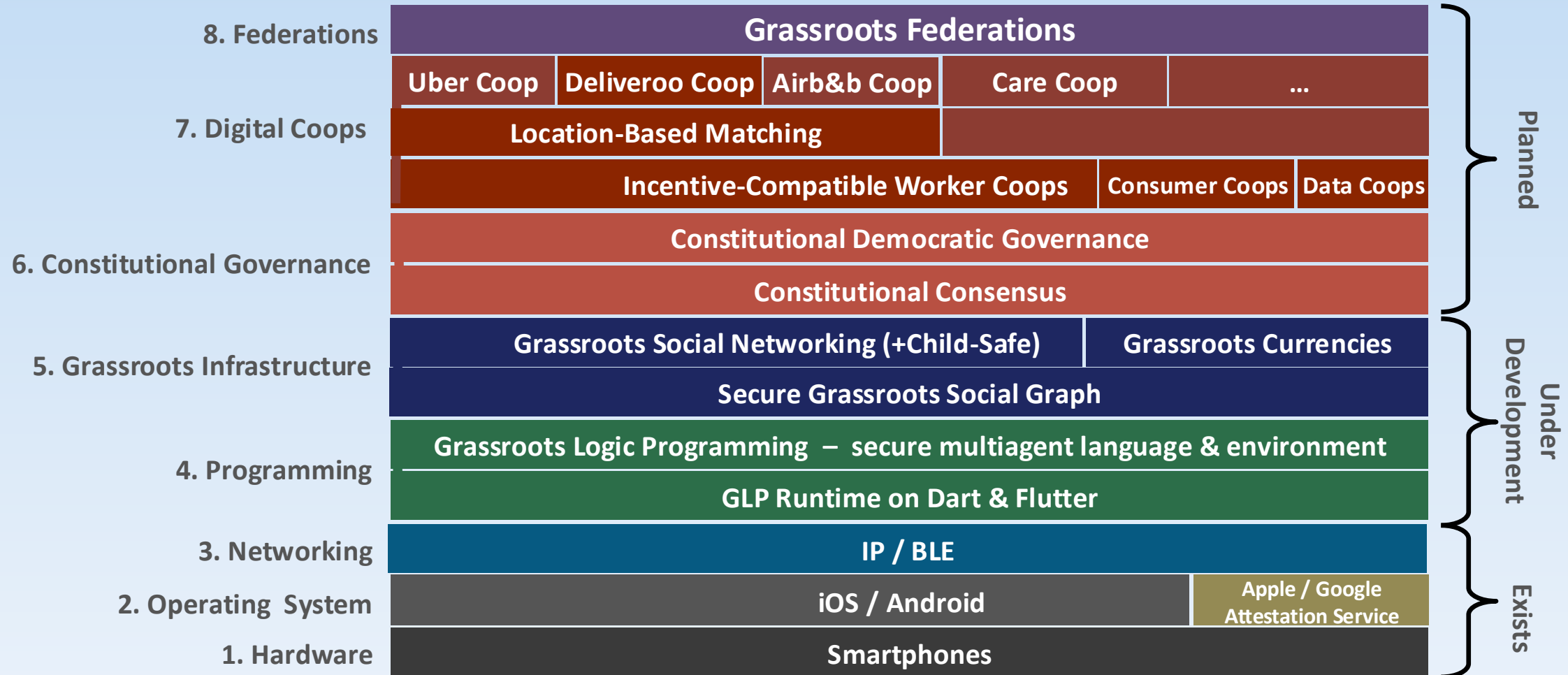
Abstract: Computational social choice and algorithmic decision theory offer rich aggregation theory but no comprehensive process for egalitarian self-governance: aggregation, deliberation, amendment, and consensus are each considered in isolation, with key metric-space aggregators being NP-hard. Here, we propose constitutional governance in metric spaces, integrating these stages into a coherent polynomial-... [More](#)

Submitted 14 May, 2026; **v1** submitted 13 May, 2026; **originally announced** May 2026.

4. [arXiv:2604.25596](#) [pdf, ps, other] [cs.DC](#) [cs.HC](#) [cs.MA](#) [cs.SI](#)

Volitional Multiagent Atomic Transactions: Describing People and their Machines

Questions?

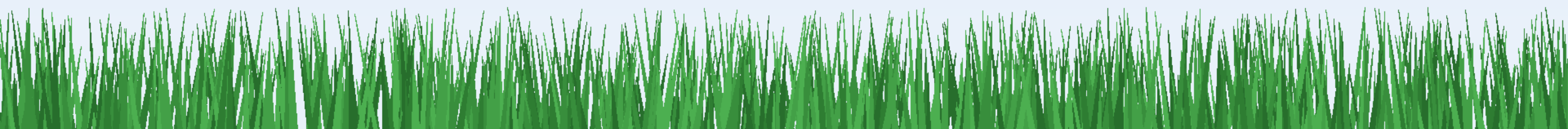


2. Grassroots, by comparison

... of cardinality of essential agents:

How many agents need to be eliminated to disable communication?

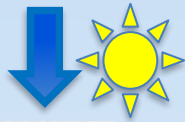
Class	Essential Agents	Cardinality	Canonical Example
Centralised	The server	One	Facebook
Decentralised	Bootstrap nodes	Finite, >1	Bitcoin
Federated	All servers, or all clients	Infinite, but not universal	Mastodon
Grassroots	All (but one 😊)	Universal	Scuttlebutt



Today: Implementing Grassroots with AI



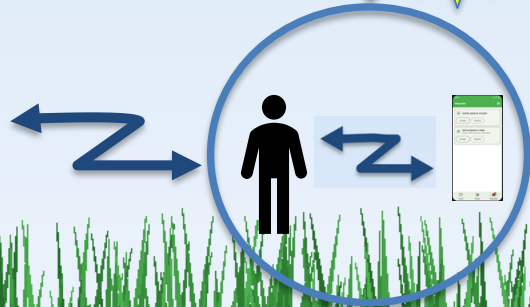
Scientific paper describing a grassroots platform



GLP program realizing the grassroots platform



Dart/Flutter implementation of GLP



Grassroots App on iPhone/Android phones

