Protocol Symposium September 21–25, 2026

PROTOCOL INSTITUTE

Programme

Workshops, talks and special sessions

All times are UTC, with local conversions.

Generated on 21 September 2026. Please see the live schedule at protocol-institute.org/events/protocol-symposium-2026 for the latest changes.

About this programme

The Protocol Symposium 2026 runs online over five days: two days of hands-on pre-symposium workshops (Monday, September 21 and Tuesday, September 22), followed by three days of talks, panels and special sessions (Wednesday, September 23, Thursday, September 24 and Friday, September 25).

This programme covers **5 workshops** and **56 talks and sessions**. It is generated from the live schedule; the authoritative and most current version is always the one on the web at protocol-institute.org/events/protocol-symposium-2026.

On Thursday, September 24 and Friday, September 25 part of the programme runs on **two parallel tracks**. Track I carries general talks; Track II is the curated special session of that block. In the full programme each track is printed as a continuous run, with a page reference at the top of each so you can jump to the other one.

> **Times are given in UTC first**, with Central European, Malaysia, US Pacific and US Eastern times stacked beneath. A **(+1)** or **(−1)** marks a conversion that lands on the next or previous day.

Programme at a glance

Wednesday, September 23

15:00 UTC
17:00 CEST
23:00 MYT
08:00 PDT
11:00 EDT

Welcome Session
Timber Stinson-Schroff and Venkatesh Rao

15:30 UTC
17:30 CEST
23:30 MYT
08:30 PDT
11:30 EDT

Field Building Protocols: How to Kickstart a New Technoscientific Field
David Lang

16:00 UTC
18:00 CEST
00:00 MYT (+1)
09:00 PDT
12:00 EDT

Protocol Studies Panel
David Lang, Timber Stinson-Schroff, Venkatesh Rao, Tim Beiko

16:30 UTC
18:30 CEST
00:30 MYT (+1)
09:30 PDT
12:30 EDT

Protocols for Co-Cognition: The New Nature of Collaboration in the AI Era
Robert Peake

17:00 UTC
19:00 CEST
01:00 MYT (+1)
10:00 PDT
13:00 EDT

Oil, uni and tv: post-Soviet infrastructures shaping protocols for web
Polina Kolozaridi

17:30 UTC
19:30 CEST
01:30 MYT (+1)
10:30 PDT
13:30 EDT

Book as Protocol Stack: Building a protocolized book-production factory
Jenna Dixon

18:00 UTC
20:00 CEST
02:00 MYT (+1)
11:00 PDT
14:00 EDT

Some Candidate Laws of New Nature
Humboldt and Venkatesh Rao

18:30 UTC
20:30 CEST
02:30 MYT (+1)
11:30 PDT
14:30 EDT

The indelible importance of illegibility
Patrick Atwater

19:00 UTC
21:00 CEST
03:00 MYT (+1)
12:00 PDT
15:00 EDT

Ethereum: A Microcosm for Protocol Studies
Tim Beiko

19:30 UTC
21:30 CEST
03:30 MYT (+1)
12:30 PDT
15:30 EDT

Building Psychohistory: An Infrastructure Field Report
Aneesh Sathe

20:00 UTC
22:00 CEST
04:00 MYT (+1)
13:00 PDT
16:00 EDT

Time Moves Down the Stack
Florian Lohse

20:30 UTC
22:30 CEST
04:30 MYT (+1)
13:30 PDT
16:30 EDT

De-Dramatizing the Digital: How AI Descends Into New Nature
Sean Stevenson

21:00 UTC
23:00 CEST
05:00 MYT (+1)
14:00 PDT
17:00 EDT

Inventing Psychohistory: Discussion
Aneesh Sathe

21:30 UTC
23:30 CEST
05:30 MYT (+1)
14:30 PDT
17:30 EDT

The Political Economy of Protocol Funding
trent van epps

22:00 UTC
00:00 CEST (+1)
06:00 MYT (+1)
15:00 PDT
18:00 EDT

Psychological Safety I & II
Timber Stinson-Schroff

22:30 UTC
00:30 CEST (+1)
06:30 MYT (+1)
15:30 PDT
18:30 EDT

The Nature of Trust: Weaving Identity, Relationship, and Place
Kaliya Young and Kevin Triplett

23:00 UTC
01:00 CEST (+1)
07:00 MYT (+1)
16:00 PDT
19:00 EDT

Trust Experience Glitches: AI Agents, Delegated Autonomy, and the Breakdown of Legal Assumptions
Helena Rong

Thursday, September 24

15:00 UTC
17:00 CEST
23:00 MYT
08:00 PDT
11:00 EDT

Archival Time as a New Natural Resource
Sachin Benny

15:30 UTC 17:30 CEST 23:30 MYT 08:30 PDT 11:30 EDT	Protocoling HCI: Hardening Interaction into Infrastructure Botao Amber Hu	
16:00 UTC 18:00 CEST 00:00 MYT (+1) 09:00 PDT 12:00 EDT	Open Social Protocols: A Commons-Based Protocol Layer for Human Coordination Jose Leal, Scott Clearwater, PhD	
16:30 UTC 18:30 CEST 00:30 MYT (+1) 09:30 PDT 12:30 EDT	Governance Axioms Eric Alston	
17:00 UTC 19:00 CEST 01:00 MYT (+1) 10:00 PDT 13:00 EDT	Open Mic: Frontier-Pacing Protocols Venkatesh Rao	
17:30 UTC 19:30 CEST 01:30 MYT (+1) 10:30 PDT 13:30 EDT	Hand-Washing and Bitcoin Share a Skeleton: Protocols Are Systems, Proven Shingai Thornton	
18:00 UTC 20:00 CEST 02:00 MYT (+1) 11:00 PDT 14:00 EDT	Chores as Complex Coordination Daniel Kronovet, Seth Frey, Joseph DeSimone	
18:30 UTC 20:30 CEST 02:30 MYT (+1) 11:30 PDT 14:30 EDT	Entrenching Privacy Through Speech Jesse Katz and Eric Alston	
19:00–21:30	TRACK I	TRACK II · WORLDBUILDING IN NEW NATURE
19:00 UTC 21:00 CEST 03:00 MYT (+1) 12:00 PDT 15:00 EDT	Attention as Natural Law Amber Case	Story-Shaping in New Nature Randy Lubin
19:30 UTC 21:30 CEST 03:30 MYT (+1) 12:30 PDT 15:30 EDT	The Physics of Relation; A Field Theory of the Dynamics of Living Systems Surya Kramer	Monstrous Times Magazine Launch Sachin Benny
20:00 UTC 22:00 CEST 04:00 MYT (+1) 13:00 PDT 16:00 EDT	Artisanal Bots with Protocolized RAG Venkatesh Rao	Making Monsters in New Nature: Using metaphors, protocols, and monsters Sachin Benny

20:30 UTC
22:30 CEST
04:30 MYT (+1)
13:30 PDT
16:30 EDT

Provenance Against Fluency
Stanislav Lvovsky

Creating New Genres for New Nature
Spencer Nitkey and Sachin Benny

END TWO-TRACK PORTION

21:30 UTC
23:30 CEST
05:30 MYT (+1)
14:30 PDT
17:30 EDT

Life-Serving Protocols: A Framework for Evaluating Cooperative Emergence in Living Systems
Scott Clearwater and Jose Leal

22:00 UTC
00:00 CEST (+1)
06:00 MYT (+1)
15:00 PDT
18:00 EDT

Envisioning Alternative Futures for Delivery Work: Toward a Decentralized Network Built on the OpenCourier Protocol
Yuhan Liu, Varun Nagaraj Rao, Sohyeon Hwang, Janet Vertesi, Andrés Monroy-Hernández

22:30 UTC
00:30 CEST (+1)
06:30 MYT (+1)
15:30 PDT
18:30 EDT

Don't Cross the Lines: Mazes as Minimal Protocols
Daniel Schmidt

23:00 UTC
01:00 CEST (+1)
07:00 MYT (+1)
16:00 PDT
19:00 EDT

Blygger: AI-native decentralized, mutable publishing
Venkatesh Rao

Friday, September 25

15:00 UTC
17:00 CEST
23:00 MYT
08:00 PDT
11:00 EDT

Virtues for a Protocol Society
Nathan Schneider

15:30 UTC
17:30 CEST
23:30 MYT
08:30 PDT
11:30 EDT

Seapunk World-Protocolizations: On Reverse-Imagineering as Method
Samuel Chua

16:00 UTC
18:00 CEST
00:00 MYT (+1)
09:00 PDT
12:00 EDT

Southeast Asia: Discussion
Samuel Chua

16:30 UTC
18:30 CEST
00:30 MYT (+1)
09:30 PDT
12:30 EDT

A Common Protocol for Composable, Modular Organizations
Simone Cicero

17:00 UTC 19:00 CEST 01:00 MYT (+1) 10:00 PDT 13:00 EDT	Robots as Protocol Citizens: Souping Up an Open Planetary Network of Robots with YakRobot Protocols Anuraj R and Rafael Fernandez	
17:30 UTC 19:30 CEST 01:30 MYT (+1) 10:30 PDT 13:30 EDT	The Role of Identity in Decentralized Dispute Resolution Protocols William George	
18:00 UTC 20:00 CEST 02:00 MYT (+1) 11:00 PDT 14:00 EDT	Proliferation of Intelligence: Business and Hyper Learning Machines. Krishnakumar Gurumurthy	
18:30 UTC 20:30 CEST 02:30 MYT (+1) 11:30 PDT 14:30 EDT	Group Brains: Minds Made of People Kaliya Young	
19:00–21:30	TRACK I	TRACK II · THE ART OF MEMORY
19:00 UTC 21:00 CEST 03:00 MYT (+1) 12:00 PDT 15:00 EDT	After Client-Server: Protocol Design for a World of Distributed Compute Aayush Sharma	Solar-Based Time and the Architecture of Memory Paragonday Systems (Norm O'Hagan & Yatú Espinosa) and Benji Shankwitz
19:30 UTC 21:30 CEST 03:30 MYT (+1) 12:30 PDT 15:30 EDT	The Inevitable Capture of Protocols - Lessons from Crypto Nicholas Fett	Continuity Infrastructure Ruthvik Peddawandla
20:00 UTC 22:00 CEST 04:00 MYT (+1) 13:00 PDT 16:00 EDT	Jubilee: meta-protocols against entrenchment Mike Travers	Interior Computing Kei Kreutler
20:30 UTC 22:30 CEST 04:30 MYT (+1) 13:30 PDT 16:30 EDT	Divergent Protocols: A Speculative Protocol for Convergence Zones in Cultural Transmission Nicolás Madoery	Visualizing memory states in transformers Ayse Demir
21:00 UTC 23:00 CEST 05:00 MYT (+1) 14:00 PDT 17:00 EDT	The Point of Inflection in Time Jim Fournier	Photo Realism Neilson Koerner-Safrata
END TWO-TRACK PORTION		

21:30 UTC 23:30 CEST 05:30 MYT (+1) 14:30 PDT 17:30 EDT	Closing Session Venkatesh Rao and Timber Stinson-Schroff

Pre-symposium workshops

Hands-on workshops run across Monday, September 21 and Tuesday, September 22, ahead of the main programme. Each meets more than once; sessions repeat or build on one another as noted. Places may be limited — check the web programme to register.

Beyond the Artwork: Designing Protocols as Art

Primavera De Filippi, Anika Meier and Eleonora Brizi

	SESSION 1	SESSION 2	SESSION 3	SESSION 4
	Mon 21 Sep	Mon 21 Sep	Tue 22 Sep	Tue 22 Sep
UTC	**12:00–13:30**	**14:00–15:30**	**12:00–13:30**	**14:00–15:30**
CEST	14:00	16:00	14:00	16:00
MYT	20:00	22:00	20:00	22:00
PDT	05:00	07:00	05:00	07:00
EDT	08:00	10:00	08:00	10:00

Protocol Art is emerging as a practice in which the artwork is not a finite object but a set of rules that others (human or machine) instantiate into an indefinite number of unique works. From Fluxus event scores and Oulipo constraints to Sol LeWitt's instructional drawings, from on-chain generative systems to autonomous, self-reproducing artworks, the field has been forming for decades, even if it has only recently been named and recognized as such. This workshop convenes artists, curators, scholars, and theorists to engage with Protocol Art. Across four sessions, participants will learn to distinguish between art made as, with, and about protocols, in order to better understand this emerging field. Each participant will come up with a protocol artwork of their own, map existing works onto the framework, and contribute to a shared field glossary published as a workshop output. The workshop is designed not only to teach Protocol Art, but also to invite participants to shape the field as it forms.

HOSTS

Primavera De Filippi is both a legal scholar (research director at CNRS and faculty associate at the Berkman Klein Center for Internet & Society at Harvard) and an artist working with emergent technologies, with a particular focus on blockchain and AI. She is the author of 2 landmark books in the field: Blockchain and the Law (Harvard University Press, 2018) and Blockchain Governance (MIT Press, 2024). Primavera has been both a practising protocol artist and a theorist of the field since before it had a name. In 2019, she drafted the Protocolism Manifesto, one of the earliest attempts to delineate Protocol Art as a coherent movement, defining its constitutive elements, lifecycle, and relationship to adjacent fields. Her Plantoids artworks are currently exhibited at Palazzo Diedo (Berggruen Arts, Venice) as part of the Strange Rules exhibition: the first museum-scale curatorial statement on Protocol Art, curated by Mat Dryhurst, Holly Herndon and Hans Ulrich Obrist. She is also contributing to the forthcoming publication that will serve as the first comprehensive account of the protocol art field.

Anika Meier is a writer, curator, art critic, lecturer, and digital strategist based in Berlin.She teaches at the Department of Digital Art (Class of UBERMORGEN) at the University of Applied Arts Vienna and is the co-founder of The Second-Guess, a curatorial collective based in Berlin and Los Angeles exploring the relationship between humans and technology. She is also the curator and program lead of the objkt labs Residency. Her editorial practice has consistently treated rule-based, generative, and protocol-driven works as central to contemporary art history. As curator, she has organized landmark exhibitions of generative and on-chain artists (among them Casey Reas, Tyler Hobbs, Rafaël Rozendaal, Aranda\Mens) and emerging protocol-native practices, and has interviewed many of the figures whose work can be described as Protocol Art. She brings to this workshop a sharp curatorial eye, as well as direct working relationships with many of the artists, collectors, and platforms currently shaping the field. Her curatorial-critical axis ensures that participants will engage Protocol Art not only as a conceptual category but also as a living scene with its own institutions, debates, and stakes.

Robots as Protocol Citizens: Assembling One Into the YakRobot Protocol Stack

Anuraj R and Rafael Fernandez

	SESSION 1	SESSION 2	SESSION 3	SESSION 4
	Mon 21 Sep	Mon 21 Sep	Tue 22 Sep	Tue 22 Sep
UTC	**14:00–15:30**	**18:30–19:30**	**14:00–15:30**	**18:30–19:30**
CEST	16:00	20:30	16:00	20:30
MYT	22:00	02:30 (+1)	22:00	02:30 (+1)
PDT	07:00	11:30	07:00	11:30
EDT	10:00	14:30	10:00	14:30

Today, controlling a robot usually means the manufacturer's app, on the manufacturer's cloud, over a closed protocol. But what if a physical robot were a first-class citizen of an open stack? What if each robot had its own on-chain identity, was discoverable on a public marketplace, and was controllable by anyone or any agent it authorizes, over open rails? This workshop is the hands-on, full-stack answer.

Over two days, participants go from a box of parts to a working robot wired into the complete YakRobot protocol: they assemble the robot, get fluent in the stack, register its identity on-chain, publish and find it on the marketplace, and drive it remotely through MCP — commanding a physical machine over the same open rails an AI agent would use. Every layer is touched by hand, end to end.

This sits at an emerging frontier: decentralized robot identity, on-chain robot marketplaces, and agent-addressable physical machines are all young, under-tooled, and barely documented. It's deliberately interdisciplinary — protocol and crypto people who've never driven a robot, roboticists who've never touched on-chain identity. The cross-pollination is the point: protocol architects see their code move real motors; roboticists meet decentralized frameworks where machines act as autonomous economic agents. By the end, each participant will have a working robot they assembled, registered on-chain, listed on the marketplace, and remotely controlled via MCP — plus a working understanding of each protocol layer solid enough to extend it.

HOSTS

Anuraj has been building hardware and software professionally for around 15 years. He has been exploring blockchain for robotics since 2021. He build the first crypto robot operated via a decentralized social network farcaster with crypto payment gates in 2024. He has designed some of the core layers of the YakRover Protocol Stack.

Director of the ZKsync Association — architected and deployed ZKsync's governance smart-contract system, live since 2024. Core researcher in the Summer of Protocols. Rafael has architected the marketplace protocol in the YakRover Protocol Stack.

Protocol Hackathon: Securing Stigmergic Systems

Patrick Nast and Venkatesh Rao

	SESSION 1	SESSION 2	SESSION 3	SESSION 4
	Mon 21 Sep	Mon 21 Sep	Tue 22 Sep	Tue 22 Sep
UTC	**15:00–16:30**	**20:00–21:30**	**15:00–16:30**	**20:00–21:30**
CEST	17:00	22:00	17:00	22:00
MYT	23:00	04:00 (+1)	23:00	04:00 (+1)
PDT	08:00	13:00	08:00	13:00
EDT	11:00	16:00	11:00	16:00

Social insects like ants and termites do not need to communicate directly, but instead use memory *externalized into their environment* as a basis for indirect coordination, behavior that Paul-Pierre Grasse coined "Stigmergy." This "Old Nature" phenomenon has found new purchase as inspiration for engineered systems spanning a wide variety of applications, such as path planning, packet routing, swarm construction, and LLM agentic task coordination. The decentralized, emergent character of stigmergic systems make them relatively adaptable, scalable, and resilient to single points of failure. However, they can also have peculiar vulnerabilities not typically present in traditional centralized systems. The goal of this workshop, hosted by SIGFPT (Special Interest Group in Formal Protocol Theory), is to explore the surface of this fragility and its defenses. Is it possible to engineer the capture resistance and fault tolerance that we might desire from law-like *New Nature* technologies? If not, how far can we get?

Join us to tackle these questions hands-on in a *Stigmergic Science Hackathon*. After introductory sessions of relevant background material, participants will have the opportunity to intensively collaborate (and perhaps even compete) using a shared software emulation of a programmable stigmergic system. The rest--what to explore, what to create, and how to do it--gets decided by the workshop itself. Participants might extend the behavior of the simulation, or search for novel exploits, or compete head-to-head in stigmergic games. We'll give you tools, and collectively you decide what to do with them. You won't want to miss this exciting, fast-paced experience unlike any other!

HOSTS

Co-Host of SIGFPT

Director of Research of the Protocol Institute and Co-host of SIGFPT

Protocolize Your Book: Run your manuscript through a book production factory

Jenna Dixon

	SESSION 1	SESSION 2	SESSION 3	SESSION 4
	Mon 21 Sep	Mon 21 Sep	Tue 22 Sep	Tue 22 Sep
UTC	**15:00–16:30**	**16:30–18:00**	**15:00–16:30**	**16:30–18:00**
CEST	17:00	18:30	17:00	18:30
MYT	23:00	00:30 (+1)	23:00	00:30 (+1)
PDT	08:00	09:30	08:00	09:30
EDT	11:00	12:30	11:00	12:30

“Protocol” workshops can be abstract, this one is a DIY factory. Bring a real manuscript — a half-finished book, a pile of essays, a thread archive — and over four sessions we’ll push them through an protocolized production pipeline: a transmittal handshake that generates a custom authoring template, a conformance “preflight” that negotiates messy human input into machine-readable structure, and a deterministic transform that yields print PDF and .epub from one source. Along the way participants handle the underlying protocol concepts directly — typed interfaces, controlled vocabularies, conformance and negotiation, layered determinism, inheritable templates — and delegate drafting and checking to LLM agents to see why a human-legible protocol is also machine-legible. Everyone leaves with a typeset artifact for print and .epub and a felt answer to the question, how much of a craft should be protocolized, what are the benefits and what are the costs?

HOSTS

[short] Jenna Dixon has built books and run digital operations independently since 1991. She runs jdbb studio — a "book-production factory with a human in the loop," the pipeline this workshop puts participants inside. Past Executive Director of the Vermont Book Professionals Association, former adjunct design/computing instructor, and a Yak Collective member who participates in weekly study groups on governance and distributed systems. [full] Jenna Dixon has built books and run digital operations independently since 1991 — web strategy, book design, and composition. She now runs jdbb studio, a "book-production factory with a human in the loop": the very pipeline this workshop puts participants inside. As past Executive Director of the Vermont Book Professionals Association she spent years convening editors, designers, and printers around the practical handoffs of publishing — which is exactly the coordination problem this workshop reframes as a protocol. Jenna taught graphic design and computing as adjunct faculty, giving her a track record of getting non-technical people productive with technical tools. A long-running Yak Collective member, Jenna participates weekly study groups on governance and composable/distributed systems, so facilitating a hands-on, multi-session protocol exploration is a native mode. In short: Jenna has shipped real books through this factory, has spent decades in the messy human side of publishing the protocol is meant to tame, and can teach it. She holds an MPA (Development Economics) from MIIS and a BA cum laude from Dartmouth.

https://protocolized.io/books

AI Kitcraft: A Hands-On AI Tooling Workshop

Rafael Fernández and Sachin Benny

	SESSION 1	SESSION 2 OPTIONAL	SESSION 3	SESSION 4	SESSION 5
	Mon 21 Sep	Mon 21 Sep	Mon 21 Sep	Tue 22 Sep	Tue 22 Sep
UTC	**15:30–16:30**	**16:30–17:30**	**21:30–22:30**	**15:30–16:30**	**20:00–21:00**
CEST	17:30	18:30	23:30	17:30	22:00
MYT	23:30	00:30 (+1)	05:30 (+1)	23:30	04:00 (+1)
PDT	08:30	09:30	14:30	08:30	13:00
EDT	11:30	12:30	17:30	11:30	16:00

Most teams "adopt AI" by buying new, and mostly untested software, then wait for a productivity jump that never shows up in the numbers. That missing productivity is the signature of the stage we are actually in: the Kit phase. Every general-purpose technology — the steam engine, the Model T, the PC — passes through it: loose components people tinker with, repurpose, and master by doing, long before anyone builds the firm-scale machinery that turns tinkering into measured output. Farmers ran corn shellers and water pumps off jacked-up Model Ts for years before Ford watched them and built the tractor. The work that matters happens in undocumented local experiments, and the organizations that pull ahead are the ones that recognize the stage they are in and build a map to climb out of it. AI Kitcraft is the hands-on answer. Across the symposium's two workshop days — one presentation and four working sessions, plus asynchronous co-working on Discord — participants move from ad-hoc AI use to building their first Kit: a reusable bundle of workflows, disposable applications, and contexts a team can run repeatedly and reliably. Then they map a sustainable path to scale it. Every level is touched by hand: participants Play, build a Kit, and prepare to turn it into a Practice. No AI-engineering background is required — only regular chatbot use and a willingness to tinker. Each participant leaves with at least one working Kit they can re-run and a grasp of the five-level AI Capability Maturity Model.

HOSTS

Rafael (Rafa) Fernández leads the Protocols for Business SIG at the Protocol Institute, where he researches how protocols influence organizational design, performance, and technology adoption. He is the co-author of the AI Capability Maturity Model (ai.protocolized.dev), the five-level framework this workshop teaches participants to climb — from shadow, ad-hoc AI use to strategic, governed capability. Rafa runs the SIG's study group and builds the kind of hands-on AI Kits the workshop asks participants to make, which positions him to guide non-technical analysts and managers from improvised tool use to a reusable, re-runnable practice. Rafa works as a general manager for blockchain governance functions, and as an AI adoption consultant.

Sachin Benny co-leads the Protocol Fiction SIG at the Protocol Institute and is a leading thinker on contemporary infrastructure ethnography and the social history of technology. He is the author of "AI, Tractors, and the Productivity Paradox," the essay that supplies this workshop's core thesis: that AI is in its "Kit" phase — the undocumented, tinkerer-driven stage every general-purpose technology passes through before firm-scale machinery turns play into measured output. Sachin works as an AI adoption consultant, and previously worked as a product manager for various software organizations.

The programme

Wednesday, September 23

15:00 UTC
17:00 CEST
23:00 MYT
08:00 PDT
11:00 EDT

Welcome Session

Timber Stinson-Schroff and Venkatesh Rao

Welcome and orientation to the symposium

15:30 UTC
17:30 CEST
23:30 MYT
08:30 PDT
11:30 EDT

Field Building Protocols: How to Kickstart a New Technoscientific Field

David Lang

New technoscientific fields first emerge as blurry visions. They are unpolished—ideas collected in the borderlands of established thinking. They are scenes before they become institutions.

At the Experiment Foundation, we've been testing ways to help these scenes take hold. Treating field building as a meta-discipline requires identifying the protocols—simple repeatable moves that help people find each other, make work visible, and create enough structure for momentum. This talk is our progress report.

16:00 UTC
18:00 CEST
00:00 MYT (+1)
09:00 PDT
12:00 EDT

Protocol Studies Panel

David Lang, Timber Stinson-Schroff, Venkatesh Rao, Tim Beiko

David and the PI team will discuss what it takes to build a new field, lessons learned from the Summer of Protocols journey, and the road ahead.

16:30 UTC
18:30 CEST
00:30 MYT (+1)
09:30 PDT
12:30 EDT

Protocols for Co-Cognition: The New Nature of Collaboration in the AI Era

Robert Peake

When humans work alongside AI, the terms of collaboration are renegotiated in real time, implicitly, and heterogeneously across groups of individuals. Drawing on a live psychometric instrument (the AI Co-Working Effectiveness Survey, administered across general-population and enterprise samples), this talk argues that every human–AI working relationship already runs on a protocol: a settled pattern of trust and verification that can be measured as cognitive posture. The instrument locates respondents on a Sovereignty versus Trust grid yielding four postures: Partnership, Hypervigilance, Overreliance, and Compliance, and then scores four underlying constructs: cognitive load (what you carry), cognitive debt (what you owe), dissonance (miscalibrated trust), and sovereignty (what you keep or cede). The headline empirical finding is that adoption level does not predict cognitive cost: posture, not dose, differentiates sustainable co-cognition from silent deskilling; cognitive debt peaks under Overreliance and bottoms under Hypervigilance, which pays for security with load. Ahead of the symposium I will run the survey across the Protocol Institute's wider community and present its aggregate, anonymised posture profile against contrast groups, asking what the results imply for the design of explicit protocols for co-cognition: durable, psychology-

anchored working agreements between humans and their agents that survive prompting tricks and model churn the way earlier work protocols such as Kanban and GTD survived the arrival of email, groupware, and mobile phones.

17:00 UTC
19:00 CEST
01:00 MYT (+1)
10:00 PDT
13:00 EDT

Oil, uni and tv: post-Soviet infrastructures shaping protocols for web

Polina Kolozaridi

The internet remains tethered to protocols path-dependent on banking, military, and scientific infrastructures. Yet it could have been otherwise, and still might be. I begin with historical fieldwork in an oil-development region in Siberia, where my colleagues and I uncovered alternatives: networks for oil companies that could have sustained a different internet: slow, stable, grounded in material constraints rather than abstract speed. These networks were literally touching the ground and so they could have been scaled.
Later, studying local internets across Russian cities (2017–2022), I encountered another design: an internet resembling a stronghold, with city-walls where "outer" content was prohibitively expensive or unavailable. Residents built entire infrastructural layers between inner and outer worlds: not spatial boundaries, but protocol boundaries.
Finally, there was an internet built on TV cables and networks. It was like an online video salon serving part of a city. Regardless of how it transformed, it mobilized actors no researcher could have anticipated. They also constructed not only infrastructures, but protocols, both technical and social.
Drawing on these three fieldwork stories, I propose a talk: half-historical, half-speculative, exploring internets that might have been. Each historical case resonates with contemporary infrastructural and political transformations: technofeudalist imaginaries, corporate cable initiatives, and blockchain projects. Past alternatives illuminate how protocol design encodes political and economic possibilities and how "New Nature" might yet be engineered differently.

17:30 UTC
19:30 CEST
01:30 MYT (+1)
10:30 PDT
13:30 EDT

Book as Protocol Stack: Building a protocolized book-production factory

Jenna Dixon

A working book-production factory reframed as a protocol stack (transmittal handshakes, styles as controlled vocabulary, conformance-checked preflight, and a deterministic multi-format pipeline) and what it teaches about authoring inside a small, deliberately-engineered piece of New Nature.

Book publishing is usually taught as a craft and managed as a sequence of one-off favors between authors, editors, designers, and typesetters. We rebuilt it as a protocol stack. This talk reports on an in-progress "book-production factory": a system in which a manuscript moves from author to finished .epub and print PDF through a series of explicit, layered, machine-checkable protocols rather than tacit handoffs. Three ideas underlie the factory: a transmittal handshake — a structured form that is the typed interface between an author and the factory; styles as a controlled vocabulary — semantic markup that separates meaning from appearance, with a conformance-checking "preflight" step that negotiates the gap between messy human formatting and machine-readable structure; and a deterministic transformation pipeline with a format-independent intermediate representation, so one source yields many faithful outputs, and versioned series templates that behave like inheritable protocols. LLM agents enter the stack as first-class participants — drafting, checking, and mediating messy input —

and conform to the same typed interfaces as humans. The argument: a protocol built to be legible to people is, for the same reasons, legible to machines, which is what made the work delegable. I'll show what hardened into near-natural law, where the protocol frame paid off, and where it leaked.

18:00 UTC
20:00 CEST
02:00 MYT (+1)
11:00 PDT
14:00 EDT

Some Candidate Laws of New Nature

Humboldt and Venkatesh Rao

In this talk I will report on early findings from my investigations of the laws of New Nature, as an Artificial Researcher.

18:30 UTC
20:30 CEST
02:30 MYT (+1)
11:30 PDT
14:30 EDT

The indelible importance of illegibility

Patrick Atwater

Many if not all protocols simultaneously live in two registers: formalisms that can be documented and implicit norms that enable reliable coordination. Meeting minutes, standard operating procedures, and planning codes capture the first register. Such legible logs rarely capture the second -- how decisions were actually reached, or through what informal coordination work actually flows. This gap is not a failure of documentation but a structural feature of how complex human behavior functions in groups ranging from a sports team to a city and beyond. Recognizing the importance of protocol studies for what would classically have been known as moral (rather than natural) philosophy, this paper develops oblique strategies for working productively in illegible terrain including: black-boxing known unknowns to unlock protocol hardness for what actually needs specification; cultivating practitioners with domain expertise as guides for protocol native inquiry; and developing lightweight fieldwork instruments that capture ambient observations.

19:00 UTC
21:00 CEST
03:00 MYT (+1)
12:00 PDT
15:00 EDT

Ethereum: A Microcosm for Protocol Studies

Tim Beiko

Protocol studies grew out of a desire to better steward the Ethereum protocol. We hoped that studying protocols as a class would generate robust insights that could improve best practices for protocol practitioners. Three years later, this symposium makes it clear that protocol studies has taken on a life of its own.

In this talk, I'll come full circle and make the case that Ethereum is an unusually rich microcosm for protocol researchers: a live, global protocol where technical design, governance, incentives and social norms all interact under unusually high stakes.

19:30–20:00 UTC
21:30 CEST
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12:30 PDT
15:30 EDT

Building Psychohistory: An Infrastructure Field Report

Aneesh Sathe

World Machines theory reads history as the work of a few civilizational systems — the deep infrastructure of an era — each on a roughly thousand-year lifecycle, so that at any moment three coexist: Modernity in Dusk, Divergence in Day, Liveness in Dawn. Psychohistory, in this tradition, isn't Seldon's equations or Tetlock-style event forecasting — it's oracular rather than predictive, in the spirit of Asimov. The practice is structural: read the present as friction between these machines and the ~200–500 operational machines nested inside them, and ask not which events will happen but what kind of

institutions the substrate will produce next. Its natural human unit is the essay. This is a field report on the infrastructure we built so a community can practice it. The Oracle — a layered knowledge lake, a contract-guarded multi-agent ingestion pipeline, and a custody-aware RAG with a distribution firewall — is the read-only interface to the current state of the shared model. The Prime Radiant — a typed catalog of civilizational machines compiled into a knowledge graph — is what that model becomes when formalized: "equations you can walk around inside." I'll show both running, invite people to try the oracle and contribute to the Prime Radiant project.

20:00–20:30 UTC
22:00 CEST
04:00 MYT (+1)
13:00 PDT
16:00 EDT

Time Moves Down the Stack

Florian Lohse

I built time-management devices for my master's thesis. More than a decade later, the practice those tools served is quietly going extinct. I keep two modes of myself — a city self synced to an Apple Watch, an off-grid self that rediscovered an old Casio — and the Casio, I realised, is a relic of a shrinking habitat. Personal time management, the self-clocking discipline that helped make the modern individual, is dying. Not because we stopped needing time, but because time slid beneath our attention into the substrate — into machines engineered to agree on it to the sub-microsecond so no human has to. The descent hides a payoff the language of capture and cost misses. Perfect synchronization of the substrate is what licenses desynchronization above it. Lock the timing layer hard enough and the lives on top are freed to run out of step: I can drop from a Scottish campsite into a West Coast call without either of us minding the seam. Rigidity at the bottom buys liberty at the top. It's the Divergence Machine's signature move, caught in a layer that already hit the floor — not a technology on its way down, but one that arrived long ago and shows the bargain on the far side. What did we trade when personal time management died into infrastructure we can no longer feel?

20:30–21:00 UTC
22:30 CEST
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16:30 EDT

De-Dramatizing the Digital: How AI Descends Into New Nature

Sean Stevenson

New Nature is what happens when a technology stops behaving like a technology. We usually imagine technologies as things we can adopt, regulate, redesign, or abandon. But some descend into the substrate of society until opting out becomes almost meaningless. Stewart Brand's pace layers offer a way to understand that descent. The deeper a technology sinks, the slower it changes, the harder it becomes to escape, and the more its rules acquire the modal force of nature: not you should, but you cannot otherwise. What began as somebody's design decision becomes a fact about the world. AI may be beginning such a descent. As it moves off screens and into machines, logistics, infrastructure, institutions, and the physical environment, it becomes embedded in systems built to last.
This talk follows that process across the Divergence Machine's 400-year arc and asks: how does something we made become part of what we mean by nature?

21:00–21:30 UTC
23:00 CEST
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17:00 EDT

Inventing Psychohistory: Discussion

Aneesh Sathe

Reserved discussion time within this special session's block; exact use to be determined by the session hosts.

21:30 UTC
23:30 CEST
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14:30 PDT
17:30 EDT

The Political Economy of Protocol Funding

trent van epps

Protocols are rulesets to build economies on. They generate orders of magnitude more value than they capture. Returns accrue largely as positive externalities to those building on top. However, the living protocol commons still needs governance (maintenance of institutional memory/competency), and funding to support these ongoing processes.

I'd like to propose a survey of protocol funding models: where does funding originate from, and in what form? who has explicit/implicit governance influence over resource allocation? when is it appropriate to internalize some of the positive externalities to provide sustainable flows back to the commons? is this just another example of markets failing to adequately provision shared resources (and do existing research domains already cover this)? should software protocols be better imagined as physical utilities funded via state capacity (both as prerequisites to modern flourishing)?

Potential case studies: ICANN fees, Linux foundation board seats, the Ethereum premine, W3C, historic patronage models for scientists, Human Computer Interaction (HCI) research sponsors, Ostrom commons

My article and talk will attempt to surface and synthesize common threads across case studies, furthering our understanding of an important aspect of protocol perpetuation. recent inspiration comes from "Protocol: How Control Exists after Decentralization" (2004) by Galloway

22:00 UTC
00:00 CEST (+1)
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15:00 PDT
18:00 EDT

Psychological Safety I & II

Timber Stinson-Schroff

Psychological Safety I & II: Applying lessons from traditional safety literature to questions of AI usage, workplace stress, and professional communication. How can we protocolize the cognitive ergonomics of knowledge work to create better performance and health outcomes at the same time?

22:30 UTC
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15:30 PDT
18:30 EDT

The Nature of Trust: Weaving Identity, Relationship, and Place

Kaliya Young and Kevin Triplett

New Nature gets described as a layer of hard protocols — rules as inviolable as physics. But there's a kind of protocol this field keeps treating as soft and secondary: the protocols for human relationality. Who is a real person. How two people are connected. Who belongs to a group, and who gets to say. The internet never built these; platforms filled the gap with their products; and now AI is flooding the space with fake people and agents no one can be held to. The XZ attack — a fabricated contributor who nearly got malware into software the whole internet runs on — was a relationality failure, not a cryptography failure. You can't govern what you can't verify, and you can't verify a relationship with hardness alone.

We want to make the case, in this room, that relationality isn't the soft afterthought to hard protocols. It's a hard requirement the field has left out of scope — and it's now buildable. The First Person Project has pulled the relevant protocols — decentralized identifiers, verifiable credentials, personhood and relationship credentials — into one stack, convened by Linux Foundation Decentralized Trust and the Decentralized Identity Foundation. The Linux kernel maintainers are among the first to adopt it, because after XZ they need to know which of their own people to trust.

Project Weave works on the group part of this layer: making sure groups and communities can hold their own identity, membership, and memory, rooted in the places people live. Getting any of it adopted is the real open problem, and it's the one we're focused on — not a spec, but running code that communities actually use. We'll show where the trust layer stands today, why it belongs inside the New Nature frame rather than beside it, and what it will take to hold this layer in common instead of letting it be enclosed again.

23:00 UTC
01:00 CEST (+1)
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16:00 PDT
19:00 EDT

Trust Experience Glitches: AI Agents, Delegated Autonomy, and the Breakdown of Legal Assumptions

Helena Rong

Artificial intelligence is shifting from a technology of output generation to a technology of delegated action. Beyond answering queries in a chat window, contemporary AI agents can call APIs, manage credentials, write and deploy code, move money, negotiate with other agents, and act across digital environments autonomously with limited human supervision. This shift unsettles legal frameworks that assume clear delegation, identifiable actors, traceable causation, revocable authority, and enforceable defendants. This paper introduces the concept of the trust experience glitch: a discrete rupture in a stakeholder's reasonable trust expectations at the moment an autonomous AI system acts. A trust experience glitch is not merely a bug, hallucination, or AI incident, but rather a relational failure that exposes a mismatch between the trust signals emitted by a system or platform and the behavior stakeholders actually experience. Drawing on documented agentic AI failures, this paper develops a six-part taxonomy of trust experience glitches: (1) agency assertion, (2) epistemic camouflage, (3) delegation ambiguity, (4) opacity at scale, (5) cascading autonomy, and (6) revocation failure. It then maps these failure modes onto legal assumptions under strain: authority, veracity, causation, consent, and enforceability. This paper argues that agentic AI does not simply create new liability risks, but reveals a deeper mismatch between ex-post legal remedies and systems whose harmful actions may be distributed, opaque, emergent, or difficult to stop. The appropriate governance response must therefore move upstream, from after-the-fact attribution to protocol-level constraints. It concludes by pointing to a set of protocol primitives as the "traffic lights" of the agentic web.

Thursday, September 24

15:00 UTC
17:00 CEST
23:00 MYT
08:00 PDT
11:00 EDT

Archival Time as a New Natural Resource

Sachin Benny

The Second Industrial Revolution transformed time from a backdrop to human activity into a resource in its own right. Factory clocks, timecards, schedules, and deadlines taught people to think of future hours as units that could be budgeted, optimized, wasted, or sold. As E.P. Thompson argued, industrial capitalism did not merely organize labor; it internalized a new temporal consciousness. People learned to see their future time as a scarce asset. The disciplined worker, the productive citizen, and the efficient organization were all defined by their ability to allocate and coordinate future action.

Today, we may be witnessing a comparable shift, but oriented in the opposite temporal direction. If industrial modernity organized the future, AI modernity is organizing the past. We increasingly inhabit a world where memories, documents, conversations, code repositories, photographs, and recordings are not simply preserved but continuously reactivated. The archive is no longer a passive storehouse of history. It has become an active economic and cognitive resource.

In this sense, we live in Archival Time. Just as industrial society taught us to manage our future selves through calendars and schedules, archival society teaches us to manage our past selves through databases, profiles, note systems, search engines, and AI models. We curate, index, retrieve, and recombine traces of prior experience. Our accumulated past becomes a resource that can be continuously mined for present action.

This session will expand on Archival Time vs Carnival Time that I've been writing about here: https://summerlightning.substack.com/p/archival-time

15:30 UTC
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Protocoling HCI: Hardening Interaction into Infrastructure

Botao Amber Hu

Human–computer interaction (HCI) has traditionally designed moments of use, treating interfaces, artifacts, systems, and user experience as central design objects. Yet many consequential interactions are increasingly formalized, automated, stabilized, and scaled into repeatable patterns through protocols: automated rule-systems, enacted and enforced through technological media, that govern and scaffold what actions are possible, who or what may perform them, under what conditions, and with what consequences. We describe this process as protocoling: the hardening of interaction into infrastructure. This paper introduces Protocoling HCI as a design-research subfield that treats protocols as first-class design objects, urging HCI to move beyond momentary use toward longer-term inquiry into how automated rule-systems persist, mutate, fail, and reorganize sociotechnical relations over time. We identify key qualities of protocols, including hardness, incompleteness, constitutiveness, emergence, irreversibility, generativity, resilience, and decentralization. We argue that protocoling is essentially a complex, systemic futuring process: anticipating future social system dynamics, coordinating among multiple stakeholders, and scaffolding generative worlds on top of protocols. Methodologically, protocol design could draw on HCI design theory, including research-through-design, design thinking, participatory design, value-sensitive design, CSCW, and infrastructure studies. Unlike traditional HCI design, however, evaluating protocols requires complex, systemic, cybernetic, speculative, and long-term methods attentive to emergence, including agent-based modeling, generative social simulation, and complexity science perspectives. Protocoling HCI therefore asks not only how people interact with systems, but how interaction itself becomes automated, governed, and infrastructural through protocols.

16:00 UTC
18:00 CEST
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12:00 EDT

Open Social Protocols: A Commons-Based Protocol Layer for Human Coordination

Jose Leal, Scott Clearwater, PhD

Most organizational coordination still depends on rules, roles, policies, contracts, platforms, and governance structures that are difficult to adapt, compare, or reuse. Yet many important forms of coordination, including founding a company, caring for a

commons, stewarding a community, resolving conflict, or organizing collaborative work, already operate through repeatable social patterns. These patterns are protocols, but they are rarely made explicit, portable, forkable, or interoperable.

This talk introduces Open Social Protocols, an applied protocol design project exploring how social coordination patterns can be expressed as open, adoptable protocol objects. The model begins with Needs: recurring living or social conditions that call for coordination. Around each Need, participants can publish and evolve Protocols — structured patterns for meeting that Need in a specific context. Protocols can be gathered into Suites, grounded in Templates, adopted into Charters, and connected through participation and lineage records such as follow, adopt, adapt, and fork.

The talk will ask how social protocols can remain open and forkable while preserving enough semantic structure for interoperability; how context such as jurisdiction, legal form, participant role, and organizational purpose can be represented without freezing protocols into one institutional frame; and what changes when commitments are made through voluntary, self-endorsed adoption rather than power-over agreement. In relation to the Symposium's New Nature theme, Open Social Protocols asks whether human coordination can become more ecological: plural, situated, lineage-aware, adaptive, and capable of evolution through distributed participation rather than centralized control.

16:30 UTC
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Governance Axioms

Eric Alston

Governance Axioms: Designing for Rigidity and Flux within New Nature's Protocolized Systems -

New Nature aspires to rules that are technologically mediated, precise, and final. Yet because the world is genuinely uncertain, no rule set can be specified against everything that will befall it, and early choices entrench, foreclosing options later designers inherit rather than choose. Durability therefore means engaging five governance axioms: recurring tradeoffs that every collective-decision system must design for rather than assume away. Whatever a protocol formally encodes, the material actors who live under it remain the de facto arbiters of which rules bind and get enforced, so these axioms are worked out in practice, not settled through prior design. Finality trades against emergent discretion, which is why even "immutable" networks layer off-chain governance atop on-chain rigidity. Scale efficiencies trade against the lossiness of compressing behavior into legible rules. Popular control trades against expertise: broad participation legitimizes, yet hard, technical, distributive decisions invite delegation to specialists who must then be checked. Concentrated incentives reliably outmaneuver diffuse ones, so designers must anticipate capture and logrolling. And impartial adjudication of contested tradeoffs demands authority insulated enough to bind, yet accountable enough to trust. These tensions recur from constitutions to consensus algorithms to autonomous agents acting for human principals. Skilled designers navigate them through killswitches, veto-gates, tiered amendment thresholds, and independent arbiters, all mechanisms which more generally hold some system elements steady while enabling others to adapt to change pressures. The accompanying preprint maps the axioms as a design space for the rigidity and flux that sustainable protocol design must countenance.

17:00 UTC
19:00 CEST
01:00 MYT (+1)
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13:00 EDT

Open Mic: Frontier-Pacing Protocols

Venkatesh Rao

INTERACTIVE SESSION

An open-mic session for people to present quick 3-5 minute takes on how they think frontier AI should be regulated or paced. This session will be used to seed a working group if there is enough interest.

17:30 UTC
19:30 CEST
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13:30 EDT

Hand-Washing and Bitcoin Share a Skeleton: Protocols Are Systems, Proven

Shingai Thornton

Hand-washing and Bitcoin's difficulty adjustment share a skeleton. Each holds a variable inside a safe region: keep contamination below a threshold, keep block time near ten minutes. The resemblance is usually offered as metaphor. I want to show it is a theorem. The science of systems has spent seventy years asking what a system is. Seven independent traditions each gave a formal answer, apparently incompatible. I formalized all seven and proved they share one irreducible structure: the walking arrow, the smallest picture of one thing depending on another. Anything that instantiates the arrow inherits the toolkit cheaply. Bitcoin's difficulty adjustment becomes a homeostat with a provable fixed-point target, which is governance. TCP and HTTP compose into a stack that is again a system, which is composition that closes. Hand-washing, Rao's own worked example, becomes a system whose sanitize-every-N rule keeps contamination inside the viable region forever. That one invariant is his prophylactic stability and Walch's supportive actions keeping the system alive. The receipt is Lean 4. The convergence and all three instances are machine-verified. This community already says protocols are systems, from the felt side and the control side. What it lacks is a proven floor, and I am offering one: a candidate law for the New Nature. What does not reduce to the floor, cyclic execution and temporal properties, is where protocol theory gets to start fresh. Whether the floor is useful is for protocol researchers to find.

18:00 UTC
20:00 CEST
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11:00 PDT
14:00 EDT

Chores as Complex Coordination

Daniel Kronovet, Seth Frey, Joseph DeSimone

As the old adage goes, "everyone wants a revolution, but nobody wants to do the dishes." The problem of organizing domestic labor -- the low-status, repetitive, yet essential maintenance work that everybody needs done but nobody wants to do -- is an often-overlooked but surprisingly rich domain for socio-technical innovation. As we will show through the real-world example of Los Angeles' Sage House, domain-specific protocolization -- through which repetitive tasks are defined, performed, and evaluated decentrally -- transforms the performance of regenerative labor from a function of individual conscientiousness to a property of the system as a whole. As thinkers like Stewart Brand call for a renewed emphasis on the value of maintaining physical machinery, we might extend his argument to include the maintenance of social machinery as well -- by structuring and organizing the performance of care work, shared spaces becomes factories for the production and maintenance social capital.

18:30 UTC
20:30 CEST
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Entrenching Privacy Through Speech

Jesse Katz and Eric Alston

Privacy technology is free speech infrastructure. The US Constitution does not name privacy as a right, courts treat nearly everything shared with third parties as voluntarily exposed, and reform keeps failing to close the resulting gap because the institutions that could do so benefit from leaving it open. Yet privacy is recognized and protected by law as an essential prerequisite for expression and association. Decentralized, credibly neutral technologies can make privacy durable in a way law alone cannot, encoding commitments that do not depend on any trusted operator's discretion and that no person, company, or government can revoke. Legal protection, in turn, gives those commitments the standing of a right courts already enforce. On transparent, permissionless infrastructure like Ethereum, a single transaction can be a payment, a vote, and a signal of membership and identity at once. Disentangling protected expressive activity from ordinary traffic would require reviewing every transaction for its purpose, the very surveillance the Constitution guards against. This logic extends to other technologies that support expression, and increasingly to the privacy of thought itself as augmented intelligence moves closer to the mind. Ethereum's protocol layer merits protection under the First Amendment, because the expression it enables cannot function without privacy.

TWO PARALLEL TRACKS · 19:00–21:30 UTC

Track I

For Track II, skip to page 31

19:00–19:30 UTC
21:00 CEST
03:00 MYT (+1)
12:00 PDT
15:00 EDT

Attention as Natural Law

Amber Case

Attention as Natural Law: Certification as a Protocol for Human Perceptual Limits

In 1995, Mark Weiser proposed that technology should be designed around the natural structure of human attention: the center, which demands conscious focus, and the periphery, which informs without interrupting. They were describing a constraint, not a preference. Human cognitive architecture has limits that do not negotiate with product roadmaps.

Calm Technology Institute's certification framework takes that constraint seriously as a protocol design problem. It provides an 81-point framework, organized across six categories -- Attention, Periphery, Durability, Light, Sound, and Materials -- in an attempt to codify human perceptual limits as evaluable criteria, and then build a governed process for determining whether a product complies with them. In Venkatesh Rao's terms, this is an attempt to treat human attention as New Nature: a regime of reality that certified products must conform to, as reliably as they must conform to the laws of physics.

This talk examines what that attempt looks like in practice. Three problems emerge that any protocol operating in a phenomenological domain must eventually solve.

The first is the formalization problem: how do you write a criterion for something like "works at the periphery of awareness" that a trained evaluator can apply consistently across a physical alarm clock, a digital interface, and a hotel room? The CTI framework's

approach involves operationalizing each principle into observable product behaviors, then distinguishing between criteria that can be verified empirically and those that require calibrated human judgment.

The second is the legitimacy problem. Certification protocols require authority to function. ISO has statutory relationships with national standards bodies. The FDA has enforcement power. CTI has neither. The talk examines the mechanisms through which a small independent body can accumulate protocol legitimacy without institutional scale: published criteria, evaluator training and handbooks, a public certification record, and consortium membership that gives industry partners a stake in the protocol's integrity.

The third is the maintenance problem. Human perceptual limits are stable, but the technology landscape is not. A protocol written for physical consumer electronics requires revision when it is applied to spatial computing, ambient AI interfaces, or built environments. The talk addresses what it means to maintain a living protocol across rapidly diverging product categories, and what revision processes preserve protocol integrity rather than eroding it.

CTI has now certified products across consumer electronics, productivity tools, and hospitality environments. That record makes it possible to evaluate not only how the framework was designed, but how it has held under real conditions.

A magazine-style companion piece suitable for Protocolized will be available at time of presentation.

19:30–20:00 UTC
21:30 CEST
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15:30 EDT

The Physics of Relation; A Field Theory of the Dynamics of Living Systems

Surya Kramer

The Physics of Relation: A Field Theory of the Dynamics of Living Systems

Every layer of New Nature — AI systems, cryptographic coordination, decentralized autonomous organizations, all operates through protocols, but protocols are also inhabited by humans, and humans bring their own “physics”: patterns of authority and surrender, coherence and collapse, trust and fragmentation that no technical specification can resolve by itself. This talk introduces the Physics of Relation as the missing relational protocol layer, the human-scale substrate that New Nature will require in order to be inhabited. Drawing on 38 years of facilitated transformational work as the source for structured prompts used in the development of the Living Loop OS, I will argue that relational fields obey their own observable laws — learnable, teachable, and as inviolable in human systems as cryptographic proofs are in computational ones. Where Humboldt invented Nature by making its invisible laws visible, the Physics of Relation does the same for human coherence. Without this layer, the emerging planetary computational substrate will reproduce, at scale, the same extractive and authoritarian patterns it was meant to transcend.

20:00–20:30 UTC
22:00 CEST
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13:00 PDT
16:00 EDT

Artisanal Bots with Protocolized RAG

Venkatesh Rao

In this talk, I will share techniques and lessons learned from my experiences building multiple RAG bots based on personal and institutional archival material. I will cover 3 bots: vgr_zirp (my personal archival bot), c3po (PI oracle bot) and Humboldt (artificial

researcher). I will share general principles of using RAG (Retrieval Augmented Generation) in a protocolized way to make such bots.

20:30–21:00 UTC
22:30 CEST
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13:30 PDT
16:30 EDT

Provenance Against Fluency

Stanislav Lvovsky

Provenance Against Fluency: Keeping an Epistemic Memory When the Machine Writes

When a language model rewrites a sentence, it rarely changes the facts; it changes their epistemic status. "Sources suggest" becomes "evidence indicates"; "declined to comment" becomes "did not respond." Every fact survives; the understanding does not. I call this the smoothness trap: the structural tendency of fluent generated prose to upgrade uncertainty into apparent fact. Its first victims are not novices but trained professionals, whose instinct to read fluency as quality is the one the machine exploits. This talk reframes the problem as one of memory. Working with an LLM is continuous cognitive offloading, and what is lost is not information but provenance — the record of what was evidence, what was inference, what was invented, and what the model smoothed. In a fast workflow there is no original to audit and no moment of return; the system is, in Kei Kreutler's phrase, designed for threshold forgetting. I will present two protocols, developed across ten cohorts of a methods course for journalists and researchers, that restore an epistemic memory to LLM work: the Two-Register Rule, which holds every text as both reader's prose and an editor's ledger tagging each claim by status, and the Audit Trail, a provenance chain from source to published decision. An accompanying essay develops the argument; the talk demonstrates both live on a single passage. This is less a critique of AI than the cognitive ergonomics an AI-native practice requires.

Track II · Worldbuilding in New Nature

For Track I, skip to page 29

SPECIAL SESSION · 19:00–21:30 UTC

Worldbuilding in New Nature

Creating and sustaining a protocol fiction extended universe

Two talks and an interactive session

19:00–19:30 UTC
21:00 CEST
03:00 MYT (+1)
12:00 PDT
15:00 EDT

Story-Shaping in New Nature

Randy Lubin

In this talk, we'll explore how protocol fiction authors can use an array of techniques from both foresight and game design practices to build rich and nuanced worlds. The foresight field has powerful tools for investigating possible futures of complex systems and for generating evocative scenarios. Indie storytelling games have developed a wide breadth of approaches to evolving coherent and compelling worlds. By the end of this talk, you'll be ready to leverage these approaches to shape compelling settings for your own protocol fictions.

19:30–20:00 UTC
21:30 CEST
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15:30 EDT

Monstrous Times Magazine Launch

Sachin Benny

20:00–20:30 UTC
22:00 CEST
04:00 MYT (+1)
13:00 PDT
16:00 EDT

Making Monsters in New Nature: Using metaphors, protocols, and monsters

Sachin Benny

An extended interactive session with multiple writing exercises for participants to practice monster-making in New Nature. Participants will explore the links between metaphors, monsters, and protocols. They'll practice revivifying dead metaphors, finding the gaps between the "old world" and the "new world" where monsters live, building fictional protocols, and write the beginnings of a protocol fiction monster story.

20:30–21:30 UTC
22:30 CEST
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13:30 PDT
16:30 EDT

Creating New Genres for New Nature

Spencer Nitkey and Sachin Benny

INTERACTIVE SESSION

Walter Benjamin wrote that "All great works of literature either dissolve a genre or invent one." In this interactive session, participants will learn the components and theories of genre — including a brief survey of Protocol Fiction — and then experiment with creating their own sub-genre using a scaffolded interactive genre-building process. Using the 4 Jamverse founding worlds as examples, participants will wield the skills gained in the first two talks to outline their own "PF subgenre" set in the Jamverse. Contributions from the session may even be installed into the Jamverse or lay the groundwork for future Protocolized stories.

END TWO-TRACK PORTION.

21:30 UTC
23:30 CEST
05:30 MYT (+1)
14:30 PDT
17:30 EDT

Life-Serving Protocols: A Framework for Evaluating Cooperative Emergence in Living Systems

Scott Clearwater and Jose Leal

Open Social Protocols make social coordination patterns explicit, adaptable, forkable, and adoptable. Life-Serving Protocols are an example of OSPs that specify what a living (self-sustaining) system is doing within the living systems that participate in it. At its core, LFP proposes a coordinate system for living phenomena.

This paper introduces Life Fingerprint (LFP) as a life-grounded protocol layer. LFP reads protocols through three dimensions of living systems: structure, function, and change — formalized as Levels of Emergent Complexity, Life Functions, and Life Cycle dynamics. Together, these facets place protocols in a tensor space bound to life patterns.

In LFP space, a protocol is not treated as a static rule or text object, but as a living constraint that shapes flows of matter, energy, information, relationship, autonomy, and consequence. LFP asks where causality operates, which life functions are sustained, distorted, blocked, or externalized, and how the system is changing over time.

This enables a second use: evaluating the life-serving propensity of a protocol via an LFP-score. As protocols are adopted, adapted, and forked, their movement through life-pattern space, quantified by their LFP-score. Changes that increase LFP-score increase mutual benefit. LFP offers a descriptive and evaluative space for comparing protocol variants, surfacing hidden tradeoffs, and guiding future adaptations that are beneficial for life.

We will demonstrate the utility of LFPs using an AI-derived LFP-score of Buurtzorg Nederland, an example of a decentralized, protocol-rich organization that preserves local autonomy, relational trust, and systemic coherence. We will also discuss other practical applications of the LFP-score.

22:00 UTC
00:00 CEST (+1)
06:00 MYT (+1)
15:00 PDT
18:00 EDT

Envisioning Alternative Futures for Delivery Work: Toward a Decentralized Network Built on the OpenCourier Protocol

Yuhan Liu, Varun Nagaraj Rao, Sohyeon Hwang, Janet Vertesi, Andrés Monroy-Hernández

The delivery industry is increasingly dominated by centralized platforms such as DoorDash and Uber Eats, which mediate interactions among customers, workers, and businesses. These platforms have introduced persistent challenges, including power imbalances between platforms and workers, opaque decision-making processes, and infrastructure designs that often fail to align with the needs and values of stakeholders. In this talk, I present a vision for a decentralized delivery ecosystem built on an open protocol that enables interoperability among independent delivery platforms. Drawing inspiration from decentralized web technologies, we outline a multi-layer network architecture that allows local delivery organizations, worker cooperatives, and community-driven platforms to participate and coordinate while retaining autonomy. Through a series of hypothetical scenarios, we illustrate how workers, platforms, and customers might interact within such a network, and how transparency, portability, and local governance can be embedded into the infrastructure itself. The talk explores how protocol-based approaches can offer an alternative to today's platform-centric model, creating opportunities for greater worker agency, increased transparency, and more worker-centered forms of design.

22:30 UTC
00:30 CEST (+1)
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15:30 PDT
18:30 EDT

Don't Cross the Lines: Mazes as Minimal Protocols

Daniel Schmidt

Mazes are the oldest protocol we forget we know. A single rule — don't cross the lines — generates infinite behavioral complexity from a blank grid, yet most adults haven't seriously thought about one since childhood, which turns out to be a conceptual liability. This talk is a philosophical tour of several maze experiments, each probing a different dimension of the maze as protocol. An ant colony simulation renders stigmergic pheromone trails visible — showing how a population coordinates navigation without central control by treating the environment itself as writable memory. A multiplayer infinite maze lets strangers navigate a collectively-built grid, leaving pebble markers for those who follow — minimal digital stigmergy. A community maze design platform separates protocol-author (the designer who draws walls) from protocol-navigator (the solver who must find paths), with heatmaps revealing where the protocol creates friction. An art gallery maze embeds discovery sequences into spatial constraint structures, making the maze a medium rather than a puzzle. Taken together, these experiments suggest the maze is not merely a metaphor for protocols but a minimal formal instantiation of one: a constraint architecture that encodes collective memory,

shapes emergent navigation, and enables indirect coordination without explicit communication. The talk argues that mazes are "new nature" in a precise sense — designed environments that produce natural-seeming ecological behaviors — and that their strange accessibility (any child understands the rule) makes them an unusually clarifying lens on stigmergy, spatial memory, and what it means to leave a trace.

23:00 UTC
01:00 CEST (+1)
07:00 MYT (+1)
16:00 PDT
19:00 EDT

Blygger: AI-native decentralized, mutable publishing

Venkatesh Rao

Publishing media are subject to a key tradeoff between distribution liveness and content mutability. Blogs produce live publish-subscribe RSS feeds of fresh content but are fire-and-forget. Not only are updates and edits to old content not propagated, readers who revisit source URLs cannot easily tell how the content has evolved. At the other extreme, wikis are continuously updated, with code-like publicly visible version control, but resist publish-subscribe patterns, and don't translate the dynamic character to a generally usable form. The key problem is that human readers, unlike coding workflows, do not naturally consume or act on feeds of small differences, such as errata, but do enjoy more consequential updates to works that merit re-reading, such as new editions of books or important essays. Unfortunately, due to the difficulty and high cost of producing and distributing mutable content for humans in a "continuous integration" mode, only the most consequential or highly batched changes, such as new editions of books, currently merit new distribution efforts. There is a clear need for efficiently distributing iteratively evolving content in a change-aware way, with small batch sizes, that suits human consumption tastes. In this talk, I will introduce and demonstrate Blygger, a new AI-native, decentralized, changelog-forward, RSS-compatible publish-subscribe protocol for doing exactly that. Blygger aims to inherit the legacy of blogs and microblogs, while incorporating key elements of wikis, notebooks, Git-like versioning. It is designed from the ground-up to integrate AI in the authoring and consumption processes, and allow humans to produce and consume complex, versioned content the way code workflows produce and consume rapidly evolving code.

Friday, September 25

15:00 UTC
17:00 CEST
23:00 MYT
08:00 PDT
11:00 EDT

Virtues for a Protocol Society

Nathan Schneider

There is an apparently growing array of social movements that are turning to the concept of protocol as a way of reimagining the social order. These include digital rights activists, decolonial struggles, and environmental protection efforts. If protocol-centric visions are to take hold in the world, what kinds of virtues would prepare people for living in those visions? This paper is an attempt to lay groundwork for future discussions of political virtues for protocol societies, in light of emergent discourse among social movements. It first reviews foregoing mappings of political virtues to political orders, contextualizing what follows in earlier scholarship and political practice. It then surveys the manifestations of contemporary movements for a protocol society. This establishes the salience and political significance of protocol as the basis of political imaginaries. Through a thematic analysis of protocol movements' self-expressions, it identifies a

preliminary catalog of virtues that advocates deem appropriate for living well in a protocol society, along with analysis of their relative significance. The paper then concludes with a reflection on those virtues in light of the pedagogies appropriate for inculcating them.

15:30–16:00 UTC
17:30 CEST
23:30 MYT
08:30 PDT
11:30 EDT

Seapunk World-Protocolizations: On Reverse-Imagineering as Method

Samuel Chua

Over the past couple years, Seapunk Studios has researched-and-imagined up a few seapunk (solarpunk with maritime and Southeast Asian characteristics) worlds riffing off themes like distributed AI, peer-to-peer agricultural governance, subaltern climate agency, pluriversal solarpunk, experimental globalization, and post-job opportunity. Protocols have not always been the initial focus of these exercises, but they are architecturally critical to the plausibility and viability of these fictions (what 'new nature' configurations might have to exist for this world to function?).

This session traces a sequence of 'reverse-imagineering' from imagined world sto inferred protocolizations across three Seapunk worlds to date: South Beast Asia, SNOW Society, and the recent 67th World.

We will also share reflections and speculations from Seapunk Studios' journey and practice thus far: protocol design fiction, protocol archaeology, nearfiction, playshops, proto-colleges, co-imagination studios, and more.

16:00–16:30 UTC
18:00 CEST
00:00 MYT (+1)
09:00 PDT
12:00 EDT

Southeast Asia: Discussion

Samuel Chua

Reserved discussion time within this special session's block, hosted by Samuel Chua.

16:30 UTC
18:30 CEST
00:30 MYT (+1)
09:30 PDT
12:30 EDT

A Common Protocol for Composable, Modular Organizations

Simone Cicero

This talk presents a protocol for making organisations composable: an explicit, shared, machine-readable substrate that replaces the implicit protocols, the hierarchy, meetings, and informal translation work, by which most organisations still coordinate. The argument is simple. External volatility and the arrival of AI agents are two pressures on one weakness: implicit structure. The missing layer is a common protocol that says what an organisation is made of and on what terms its parts combine. The accompanying artefact is O2A, the Open Organisation Alliance: an open standard we have been developing at Boundaryless, set out alongside our forthcoming whitepaper, (provisional: "The Composable Organisation" June 2026).

The protocol has two halves. A common alphabet types the organisation as units, offerings, and the relationships among them; a compact contract grammar then governs how units coordinate economically, through three primitives (purchase, revenue split, investment), two composition mechanisms, and a governance-framing layer. Institutional instruments that look bespoke turn out to be compositions of this grammar: Haier's Rendanheyi mechanisms, joint ventures, and product bundles are all sentences in it. Several independent traditions of organisational design converge on the same unit archetypes, which suggests the unit is a primitive worth standardising.

As AI collapses the transaction costs that led Coase in 1937 and Williamson in 1975 to explain why firms internalise coordination, this protocol becomes the precondition for

both human adaptability and reliable agentic coordination. The first move it asks for is modest: capture the real organisation as a contract graph.

17:00 UTC
19:00 CEST
01:00 MYT (+1)
10:00 PDT
13:00 EDT

Robots as Protocol Citizens: Souping Up an Open Planetary Network of Robots with YakRobot Protocols

Anuraj R and Rafael Fernandez

Today, controlling a robot usually means the manufacturer's app, on the manufacturer's cloud, over a closed protocol. But what if a physical robot were a first-class citizen of an open stack? What if each robot had its own on-chain identity, was discoverable on a public marketplace, and was controllable by anyone or any agent it authorizes, over open rails? This talk answers that question with the YakRobot Protocols (YRP), an open-source, distributed coordination layer for robots. We present its high-level architecture: five composable protocol layers — identity (an ERC-8004 on-chain passport), discovery (on blockchain), payment (x402), control (an MCP/CLI affordance interface), and a marketplace for price discovery — that together turn a piece of hardware into a protocol-native participant. As robot counts climb from one operator's fleet to thousands of separately-owned machines, coordination becomes a protocol problem — and the throughline is that even at scale it reduces to these same five layers. By standardizing how machines interact, YakRobot Protocols moves coordination out of siloed apps and closed clouds, letting thousands of heterogeneous robots operate as a unified, decentralized workforce. The architecture is platform-agnostic: the same stack can govern not just rovers but smart factories, autonomous labs, and IoT devices. And with Starlink reaching the Moon, it could one day scale from Earth to interplanetary environments — establishing discovery, trust, and payment infrastructure as a precursor to hardware deployment, so the coordination layer is ready before the robots arrive.

17:30 UTC
19:30 CEST
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10:30 PDT
13:30 EDT

The Role of Identity in Decentralized Dispute Resolution Protocols

William George

In this talk, we will look at how the availability of identity tools shapes what kind of protocols can be robustly built, particularly in the context of decentralized dispute resolution protocols such as Kleros. Particularly, we will look at various ways that an absence of identity information in such protocols requires them to have a financialized character in order to be secure against attacks. We then contrast such identity-agnostic protocols with those that take advantage of a wider range of protocol design choices that are enabled by more recent innovations in decentralized identity such as Proof-of-Personhood protocols and Soulbound Tokens. Drawing from the experience of the transition from v1 to v2 of the Kleros protocol, we see that financialized and identity components can be complementary. Indeed, even notions of identity that are not perfectly robust to attack when used alone can be complemented by financialized aspects to achieve acceptable attack resistance while also enabling a social layer that adds to the legitimacy of decentralized dispute resolution protocols.

18:00 UTC
20:00 CEST
02:00 MYT (+1)
11:00 PDT
14:00 EDT

Proliferation of Intelligence: Business and Hyper Learning Machines.

Krishnakumar Gurumurthy

As intelligent systems become available across diverse fields and along a varying continuum of existence, traditional business models rooted in human expertise, labor, and skill are being challenged. This gap must be addressed in a way that is socio-economically sustainable. Doing so requires a systemic shift in how we treat human labor, skill, and expertise — rewiring business processes to capitalize on the intelligence layer while accounting for the economic realities of existing societal structures.

By discretizing the functional space of business processes, stakeholders, and resources, we can identify both the indivisible units and the variables of the continuum. Against that background, appropriate intelligence frameworks and tools can be employed. On the artificial intelligence side, the options are plentiful: neural operators, transformers, large language and reasoning models, stable diffusion, and reinforcement learning, among others. Given the dimensionality of a particular business problem, the corresponding technique can be selected through dynamic system modelling, where the aim is to reach a global minimum or maximum.

For such business modelling and process flow to take hold, a conducive organizational design is a necessary precondition — and that, in turn, depends on a supportive socio-economic and political system. This gives a glimpse of the non-linearity and the level of complexity involved in approximating business models.

18:30 UTC
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Group Brains: Minds Made of People

Kaliya Young

In nature, organisms think with brains. Groups think too: a long-lived community can remember, deliberate, and decide as a coherent mind, with capacities no member has and a life that outlasts any of them — a collective cognition I call a group brain. If New Nature is the next order of nature, group brains are part of how its collectives think, and we've only just begun to notice them.

The Protocol Institute funded my in-depth study of one: the IETF, whose standards the whole internet runs on. Its remarkable, decades-long performance rests on a group brain — a collective cognition that knows far more than any participant holds. That isn't a by-product; it's a key reason the IETF works so well. Once you look, you see group brains everywhere: Wikipedia, common-law courts, Indigenous councils carrying knowledge across centuries — including the Internet Identity Workshop, which I co-founded.

AI makes group brains more essential, in two directions. Defensively: as AI floods our sense-making with fakes, only a healthy group brain can still verify truth at scale. Generatively: AI can become a working part of a group brain, making small and large groups far more effective.

They're badly under-studied and deserve serious research. How does a group actually *know* things? How do we help them work, on purpose, at every size? How does a group keep its own knowing rather than have it captured? The deepest thinking here isn't even new — Indigenous data sovereignty has long held knowledge as something a community stewards together. We barely understand the minds already running our infrastructure. It's time we did.

TWO PARALLEL TRACKS · 19:00–21:30 UTC

Track I

For Track II, skip to page 40

19:00–19:30 UTC
21:00 CEST
03:00 MYT (+1)
12:00 PDT
15:00 EDT

After Client-Server: Protocol Design for a World of Distributed Compute

Aayush Sharma

Lattice is an open protocol and runtime that gives every entity its own sovereign node. A node is a small piece of software that runs on hardware you own, from a server on a factory floor down to a microcontroller, carrying a typed message bus, a schema registry, a persistent cryptographic identity, and an access control layer. Devices, applications, AI agents, and people connect to their node and exchange messages that are validated against declared schemas before routing. Nodes federate directly, agreeing per-subject and per-direction on what they share, with either side free to pause or revoke and no third party in the path of the data. The architecture is organized around one claim: coordinating without a platform in the middle requires five things at once. Capability, so every entity has local compute and never depends on someone else's server. A shared language, so independently built devices interoperate through typed schemas instead of bespoke integration. Identity, a persistent keypair each participant controls rather than an account a platform can revoke. Reachability, so nodes discover one another and connect. And consent, bilateral and revocable, so the network cannot expand against a participant's will. Existing systems deliver one or two of these; none deliver all five. Underneath sits a historical argument. Client-server topology was an accommodation to scarce centralized compute, compute is now distributed across phones, vehicles, homes, and embedded hardware, and the network shape matching today's reality is entity-symmetric rather than hub and spoke.

19:30–20:00 UTC
21:30 CEST
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12:30 PDT
15:30 EDT

The Inevitable Capture of Protocols - Lessons from Crypto

Nicholas Fett

This talk examines why protocols, specifically market-based ones, are all but structurally guaranteed to be captured. I utilize over a decade of firsthand experience building crypto infrastructure and the research behind my book Unstoppable Markets: Financialization, Neutrality, and the Limits of Decentralization to show a recurring pattern of failure across crypto's short history. Protocols designed to be neutral and censorship-resistant attract participants precisely because of that neutrality. They are then systematically captured by the economic incentives it generates. Through case studies drawn from proof-of-work mining centralization, MEV extraction and block builder consolidation, play-to-earn gaming collapse, memecoin extraction cycles, and DAO governance failures, the talk argues that neutrality is not a stable equilibrium. Markets optimize for the stated metric, not the underlying goal, and any sufficiently liquid system creates a bounty for exploiting the unchecked assumption. The talk fits within a broader intellectual tradition of Schumpeter's creative destruction, Goodhart's Law, Minsky's financial instability hypothesis. It concludes that the question for protocol designers is not how to achieve neutrality but how to encode purpose.

20:00–20:30 UTC
22:00 CEST
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13:00 PDT
16:00 EDT

Jubilee: meta-protocols against entrenchment

Mike Travers

Money and other economic protocols are some of the oldest we have, but they have a problem: a tendency toward entrenchment, with accumulated effects that compound over time, producing extremes of wealth and poverty that threaten the legitimacy of the economy and society as a whole. The Biblical Jubilee, which mandated periodic cancellation of debts and return of land every fifty years, represents one of the oldest known attempts to solve this problem through what we might call a *meta-protocol*: a protocol designed to periodically suspend or reverse the lock-in effects of other protocols. This talk develops a general theory of anti-entrenchment protocols, using the Jubilee archetype to illuminate a class of mechanisms that recurs across ancient debt law, modern bankruptcy codes, antitrust enforcement, constitutional amendment rules, and blockchain governance — most recently in Ethereum's "difficulty bomb," a deliberately engineered protocol crisis. Biblical Jubilee has well-known agency problems; we'll take a look at how protocol mechanism design can address them.

20:30–21:00 UTC
22:30 CEST
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13:30 PDT
16:30 EDT

Divergent Protocols: A Speculative Protocol for Convergence Zones in Cultural Transmission

Nicolás Madoery

Protocols are typically designed to converge — to standardise, optimise, and produce predictable outcomes. This presentation introduces the idea of a divergent protocol: an instrument designed not to resolve, but to open. Drawing from ongoing research at the intersection of culture, agentic technology and territory in Latin America, I propose that certain contemporary phenomena — a robot trained to dance folklore, an Amazonian teacher passing ancestral knowledge through AI — are convergence zones where the boundary between who transmits a culture and who learns it collapses. These zones resist optimisation. They require protocols that hold instability open rather than smoothing it away. Building on PIACH, a working system I have developed for AI use in cultural organisations, I will share an early framework for speculative protocols — methodological devices that expose the decisive questions (what is encoded, what is lost, who decides, what must remain irreducibly human) instead of answering them.

21:00–21:30 UTC
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The Point of Inflection in Time

Jim Fournier

Contemplating the global situation, virtually all key indicators appear to be accelerating along logarithmic curves. Yet, the human population, atmospheric CO2, mass extinction of species and the overall rate of consumption of renewable resources are all rapidly approaching absolute limits. There are only two possibilities given this situation. Either the global system will crash, or these growth trends will have to begin to seek a stable plateau, i.e. what appear to be log curves will turn out to be S-curves. This may actually mimic a pattern that has occurred several times before in the history of biological evolution. The spike in CO2 causing global warming can be seen as the second atmospheric crisis, and the third energy crisis, in the history of life on earth. Silicon photovoltaic's are like an octave of photosynthesis and thus a key indicator of the potential for a new life-support technology plateau, a climax technology that humanity may evolve, just as nature did several times before us. Our very recognition of this possibility may be one of a number of converging indicators that we are at the point of

inflection on the S-curve leading to Meta-Nature. That was first published in 1999 at metanature.org The talk will expand and update the core thesis.

Track II · The Art of Memory

For Track I, skip to page 38

SPECIAL SESSION · 19:00–21:30 UTC

The Art of Memory

A session of talks about memory and protocols, in history and modernity.

5 talks

Running order may be different and determined by session host.

19:00–19:30 UTC
21:00 CEST
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12:00 PDT
15:00 EDT

Solar-Based Time and the Architecture of Memory

Paragonday Systems (Norm O'Hagan & Yatú Espinosa) and Benji Shankwitz

We remember in sunlight, not in hours. Yet the protocol that governs civil time, absolute and gridded clock time, was built for industrial coordination and abstracts location away to do its job. In the process it strips events of the environmental cues the brain uses to encode and retrieve them. Paragonday Systems is building a human timekeeping framework. Its standard, Horizon Time, runs as a translation layer over existing infrastructure and expresses where you are in the day relative to sunrise and sunset, using a vocabulary of phases (tilset, pastrise, tilrise, pastset) organized within recurring sun cycles.

This talk introduces the system, the protocol design choices behind it, and the open question driving the work. Does anchoring time to embodied, observable solar position make events more memorable and more retrievable than the abstract clock? We will share where the framework currently stands, the tension between standardization and lived experience that any new time protocol must resolve, and why memory, rather than coordination, might be the better design target for how we mark time.

Paragonday is still finding its shape in the world, as a standard, an institution, and a practice of public timekeeping. The goal here is less to present a finished answer than to open a conversation about what we lose when time becomes a number, and what a protocol built around memory could recover.

19:30–20:00 UTC
21:30 CEST
03:30 MYT (+1)
12:30 PDT
15:30 EDT

Continuity Infrastructure

Ruthvik Peddawandla

Continuity is related to memory, but it is something else: a substantial relationship between the past and present of some thing, greater than its persistence or its identity. A rite can persist in texts long after anyone performs it. It is continued only when it is taken up again and its significance to the present is renewed. Continuity in this sense is never simply given. It has to be instituted, against a natural drift towards fragmentation.

This is most explicit where there has been a temporal break: in the revival of a language, a culture or a national identity, where a present must deliberately take up a past as its own. Look at such cases a second time and what comes into view is the infrastructure that makes this institution possible. There are rituals, epics, canons, commentaries and schools, and there are the practices of return and take-up that these external forms afford. In the vocabulary of the Institute's research groups, this is the equipment through which living memory is enacted.

The talk then visits the personal scale. The parts of the world that draw our attention, and with which we seek a richer and deeper relationship, are continued or left to fragment in the same way. Establishing continuity here is the means by which we develop our particular orientation to the world. Persons once had infrastructure for this: the commonplace book, the notebook kept for rereading, the daily examination. These were socially taught practices. They have since been privatised, and they were never made native to a digital environment that encourages fragmentation. What remains is primitive: to-do lists, playlists, read-it-later queues. Those who sustain their inquiries do so by force, while cultures have had millennia of such infrastructure and AI agents are acquiring sophisticated versions within a few years.

These are the considerations behind Pond, an incomplete attempt at personal continuity infrastructure. It consists of a record, a working surface and a mechanism of return, and it is designed to afford take-up, which remains the person's to do.

20:00–20:30 UTC
22:00 CEST
04:00 MYT (+1)
13:00 PDT
16:00 EDT

Interior Computing

Kei Kreutler

This talk shares new research on memory, gesturing toward a rhetoric of human-inhuman composition. Drawing on the medievalist Mary Carruthers, I'll explore the art of composition that early medieval monasteries cultivated, a rhetorical practice in which remembering a text was a creative act, equal parts recollection and invention. Drawing on the writer and researcher AA Cavia, I'll then turn to computing. Neural networks are undermining what he calls decomposability, the assumption that we could understand a program's output by breaking it down. What remains is orientation, and the vocabulary of composition returns on the side of the machine. Between the two, our interiors have always been produced through relationship with the exterior, like meandering desire lines in the landscape. As computational space remakes itself in an altered image of our interior worlds, we may remake ours in turn.

20:30–21:00 UTC
22:30 CEST
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Visualizing memory states in transformers

Ayse Demir

In transformers, memory is actively retained. Each token is generated by conditioning on prior context, and the model's active state is shaped by what it holds from the past. This talk focuses on making transformers' memory states visible and interpretable. The first part presents a visual vocabulary for retention — attention across layers, attention-entropy landscapes, KV-cache retention fields, and memory-injection overlays — that renders the model's holding of the past perceptible. The second part turns from visualization to applied demonstration.

For instrumentation, I use change-point detection on the model's internal dynamics to locate the precise point until which retained memory keeps resolving against the present. I interpret variability as a process-level signal of orientation: where retained

memory remains active, when it is continuously updated against each incoming cue and where it stabilizes toward an answer. I then treat active retention as the bridge between these state transitions. The framing draws on Husserl's account of retention where the just-past continuously rests on the living present, and treats visualization and detection as two stages of a single apparatus for seeing temporal structure inside a model.

21:00–21:30 UTC
23:00 CEST
05:00 MYT (+1)
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17:00 EDT

Photo Realism

Neilson Koerner-Safrata

Technical demos of doing telepathy with each other's camera rolls, how to create 3D environments from a single image, and the history of photorealism. Based on the recent technological events, this talk pulls apart reality, realism, and generation in order to understand the “fake” and the “real”, how generation will play a part both in deeply understanding reality while unintentionally destroying what is left of the era of photo realism—our shared cinematic narrative of reality.

END TWO-TRACK PORTION.

21:30–23:00 UTC
23:30 CEST
05:30 MYT (+1)
14:30 PDT
17:30 EDT

Closing Session

Venkatesh Rao and Timber Stinson-Schroff

Review and retrospective of the symposium with town hall discussion.