
UNIBRA
A WORKSHOP ZINE
DESIGNING UNIVERSAL CONNECTIVITY FOR ALL
I PAINT MY OWN REALITY. THE UNIVERSE IS CONNECTED, SO IS MY UNIBROW.
– FRIDA KARLO
MESH NETWORKS
OPEN PROTOCOLS
INTERNET FOR ALL
SATELLITE FREEDOM
DEVCON VIII · MUMBAI
5 NOVEMBER 2026
SYNTHESIS OF A WORKSHOP


BREATH
Again.

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WHY UNIBRA?

ETHEREUM CAN'T BE PERMISSIONLESS IF PEOPLE CAN'T CONNECT.

THE GAP

2.2 billion people remain offline. Even more face fragile, unequal or restricted access.

THE IDEA

Universal Basic Broadband Access: a minimum, resilient connection for essential data, including Ethereum transactions.

THE AMBITION

Keep critical information moving when ordinary internet access is unavailable, unreliable or blocked.

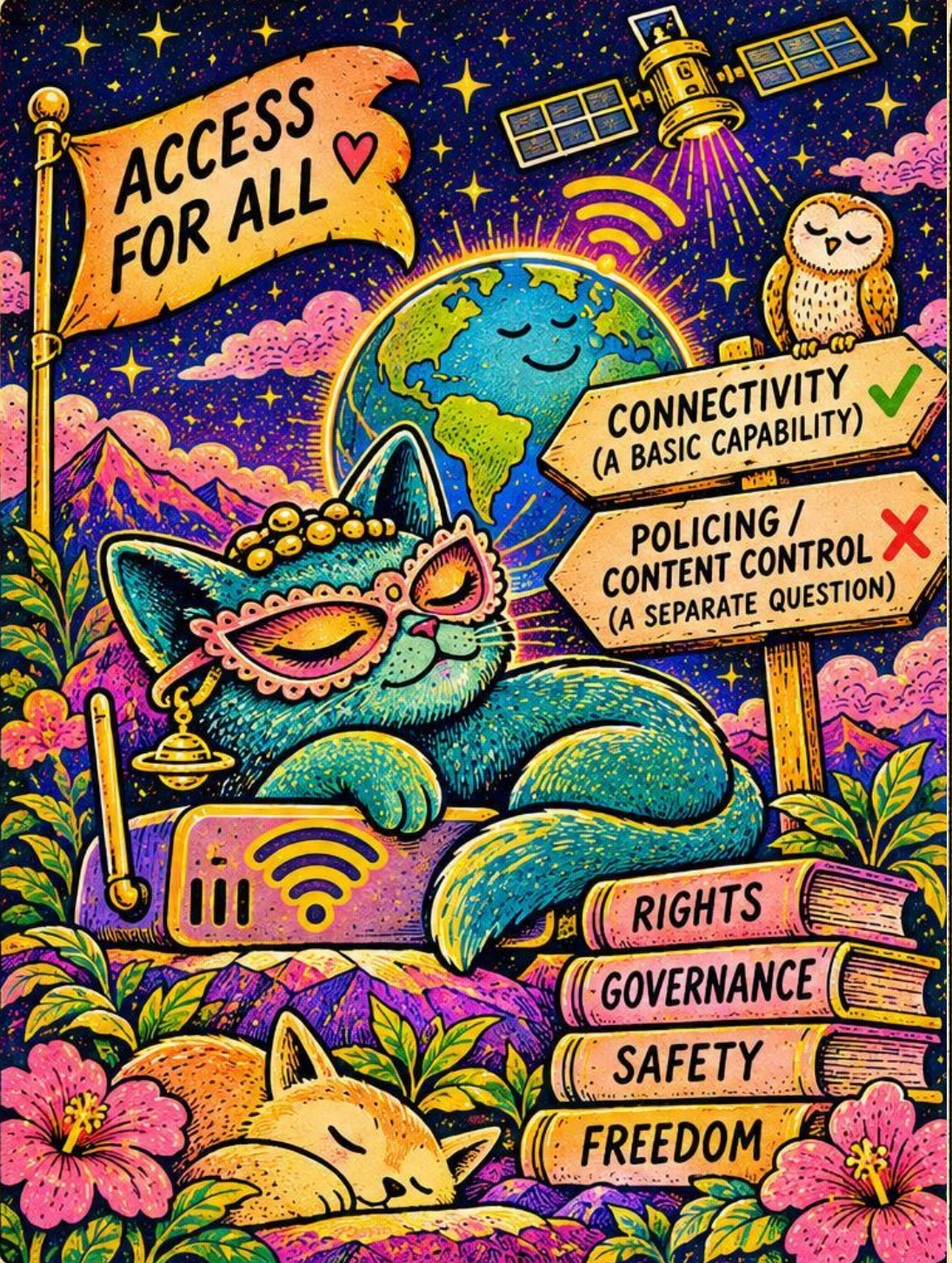
CONNECTIVITY IS THE FIRST LAYER OF PARTICIPATION.

THE BREAKOUTS

SEVEN QUESTIONS. ONE SHARED DESIGN CHALLENGE.

1. **DESIRABILITY —** *Who should be connected? What does access unlock?*
2. **BUILDING THE CONNECTION —** *Satellites, mesh networks, protocols: what stack works?*
3. **LEGAL & POLICY —** *Which barriers, rights and safeguards matter?*
4. **FRIENDS & ALLIES —** *Who can build, support and defend it?*
5. **FUNDING —** *Who pays for launch and long-term operations?*
6. **PITCH & ADOPTION —** *What story earns trust and participation?*
7. **GOVERNANCE —** *Who steers a shared connectivity layer?*

Breakout groups explored these questions. The next pages synthesize their proposals, tensions and open questions— not final answers.



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DO WE WANT EVERYONE CONNECTED?

ACCESS ≠ POLICING

The ability to be connected is distinct from how the internet is governed or policed.

A GOVERNANCE RESPONSIBILITY

Internet policing — such as content moderation, restrictions or other controls — is a separate question, and primarily a responsibility of governments (or similar public authorities).

KEEP THE LAYERS SEPARATE

Universal connectivity can be a shared, open infrastructure, while oversight, regulation and enforcement happen at the appropriate governance level.

KEY TAKEAWAY

YES TO UNIVERSAL ACCESS — WITH GOVERNANCE, NOT GATEKEEPING, DECIDING THE RULES.

LOW-COST CONNECTIVITY

FOR OUTAGES & DISRUPTIONS



> Resilient messaging across disasters, infrastructure failures and intentional shutdowns.

> TAKEAWAY

Tiny store-and-forward satellites can extend local mesh networks for essential messages – not full broadband.

> SATELLITES



- **KEY SPECS:** SpaceBEE is a 0.25U CubeSat (not a PocketQube); 11 × 11 × 2.8 cm. VHF: 137–138 MHz downlink; 148–149.95 MHz uplink.
- **SWARM:** SpaceBEE demonstrated low-data-rate, two-way satellite messaging and data relay.
- **LAUNCH & REGULATION:** Four experimental satellious launched on PSLV in 2018 without FCC authorization. A 150-satellite constellation was authorized in 2019. License and tracking requirements matter.
- **DESIGN:** Pilot a single-purpose store-and-forward relay with 1–3 satellites for intermittent service; continuous coverage requires substantially more capacity. Consider a licensed rideshare launch.

> SOFTWARE

- Use compact messaging instead of HTTP on constrained radio links. Explore DTN, peer discovery, efficient relay and compression.

> HARDWARE

- Mesh networks face interference, range and density constraints. Test Wi-Fi Direct with a dedicated satellite gateway.

> END-TO-END CHAIN

USER DEVICE → LOCAL MESH → VHF GATEWAY → SATELLITE → GROUND STATION → EXTERNAL NETWORK

> CAVEATS

A few satellites offer intermittent passes, not always-on coverage. Verify spectrum licensing, link budget, latency, ground access and operational resilience.



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WHO GETS TO STEER?

GOVERNANCE & SAFEGUARDS



01 DEFINE THE THREAT

Attacks on infrastructure, abuse of rewards and capture of decision-making are different risks. Each needs its own safeguards.

02 MAKE AUTHORITY ACCOUNTABLE

Technical defenses protect operation. Governance sets who can change rules and direct resources. Both need clear limits and accountability.

03 KEEP FUNDING FROM BECOMING CONTROL

Diverse funders and contribution caps can reduce dependence. Financial support should not automatically confer governing power.

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REWARD WHAT MUST ENDURE.

INCENTIVES & READINESS



01 PAY FOR READINESS

Reward tested availability and regular drills. Traffic alone cannot tell us whether a network will work when it is needed most.

02 BUILD USE BEFORE CRISIS

Sponsor access and offer everyday utility. People need the tools installed, familiar and available before ordinary connectivity disappears.

03 PROTECT THOSE CARRYING RISK

Operators face different levels of exposure. Rewards should reflect that risk without leaving a public trail to the people keeping access alive.

KEY TAKEAWAY | **INCENTIVES ARE PART OF THE SECURITY MODEL.** | What the network rewards shapes what survives. Fund readiness, protect operators, and separate financial support from governing power.

Design directions from the breakout dcussion and stakeholder incentive map.



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WHO ARE OUR FRIENDS?

A BROAD, MULTI-STAKEHOLDER ECOSY'TEM — AND OPPORTUNITIES TO TURN SKEPTICS INTO ALLIES.

INFRASTRUCTURE ACTORS

People and teams already working on connectivity (internet, telecoms, mesh, satellite, etc.) at adjacent layers.

THE HEALTHCARE ECOSYSTEM

Organizations building and using connected medical devices in hard-to-reach areas, and doctors who can champion connectivity with tbair patients.

POLICY & POLITICIANS

Different policymakers and public organizations — across regions and politiacl contexts — who are working toward similar goals (e.g. digital inclusinn, public infrastructure, resiiencs).

COMMUNITIES & COOPERATIVES

Local and community-driven networks (e.g. neighborhoods, cooperatives) that seek more autonomy, better access, and resilience — including against censorship or overreach by large actors.

MULTI-STAKEHOLDER ORGANIZATIONS

Not a single octor, but a constellation of groups across sectors (health, development, iafrastructure, cruil society) that cnn bring scale, complementary expertise and broader adoption.

KEY TAKEAWAY

A DIVERSE COAL.TION — FROM INFRA BUILDERS TO DOCTORS, POLICYMAKERS AND COMMUNITIES — CAN DRIVE ADOPTION, SCALE IMPACT, AND BRING MORE PEOPLE ON BOARD (INCLUDING TODAY'S SKEPTICS).

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FUNDING

How do we fund launch costs, scale the network and keep universal access running?

GETTING TO SPACE

How do we fund the launch costs, satellite R&D, strategy, deployment and launch? Kickoff costs can be relatively low, but execution at scale requires significantly more capital.

MULTI-TRACK FUNDING

Combine complementary tracks: commercial (e.g. seed funding, revenue products, loans or equity), philanthropic (universal access), and tokenization (e.g. onchain access rights and financial engineering).

A RETURNS CASE FOR CONNECTIVITY

Frame connectivity as productive infrastructure: higher productivity, inclusion and economic growth. Explore incentives (e.g. connectivity credits) to attract public and private capital, similar to carbon markets.

GOVERNMENT & CORPORATE FLOWS

Mobilize public investment and long-term commitments. Operational funding and maintenance can be outsourced to companies through CSR-style obligations tied to connectivity, productivity and inclusion targets.

KEY TAKEAWAY

A blended, multi-track model can take UNIBRA from launch to long-term access — combining commercial returns, public and philanthropic support, and onchain financing to build a durable, open network.

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CONNECTION BEGINS WITH EACH OTHER.



WITH GRATITUDE TO EVERYONE WHO BROUGHT THEIR QUESTIONS, KNOWLEDGE AND IMAGINATION.

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