Tachyon Labs

<https://www.unicefventurefund.org/call/ai-and-blockchain-data-and-trust>

Misinformation is a global crisis, with 86% of internet users misled by fake news and an annual economic toll of $78 billion, even before the rise of generative AI (GenAI). GenAI has worsened the issue by enabling scalable, high-quality disinformation campaigns, identified as top global risks by the World Economic Forum. It lowers barriers for malicious actors, allowing them to create persuasive, personalized content that spreads rapidly and undermines trust. For instance, state actors have used AI-generated deepfakes for propaganda, while manipulated political content circulates widely on social media.

Youth are particularly vulnerable, with nearly 50% relying on social media for political news despite only 17% trusting it as a credible source. Misinformation spreads quickly in these spaces, where 81% of teens report encountering conspiracy theories weekly, yet only 39% receive media literacy education. This disconnect leaves younger generations ill-equipped to navigate digital information ecosystems.

In democracies, misinformation erodes trust in institutions, with 60% of Americans dissatisfied with democracy, exacerbated by disinformation targeting elections. In authoritarian contexts, GenAI enhances censorship and suppresses dissent. The global majority faces additional challenges as AI systems, designed for Western contexts, often fail to provide accurate or culturally relevant information.

While AI can counter misinformation through fact-checking tools, its misuse creates skepticism even toward authentic information. Addressing this crisis requires systemic solutions: global media literacy education, regulatory frameworks for AI governance, and collaboration between governments, tech companies, and civil society to mitigate risks while leveraging AI’s potential for good.

Misinformation is a global crisis, with 86% of internet users misled by fake news and an annual economic toll of $78 billion, worsened by generative AI (GenAI). GenAI enables scalable, persuasive disinformation campaigns, identified as top global risks, and allows malicious actors to spread personalized content rapidly. For example, state actors use AI-generated deepfakes for propaganda, while manipulated political content proliferates on social media.

Youth are especially vulnerable, with nearly 50% relying on social media for political news, where 81% encounter and believe conspiracy theories, yet only 39% receive media literacy education, leaving them ill-prepared to navigate digital misinformation.

In democracies, misinformation erodes trust in institutions, with 60% of Americans dissatisfied with democracy, while in authoritarian regimes, GenAI strengthens censorship. The global majority faces additional challenges as AI systems often fail to provide culturally relevant information. Even authentic information is met with skepticism due to AI misuse; the liar's dividend.

**Describe the solution you are proposing and how it is solving the challenges you described in the previous question:\***

Tachyon Labs is the flagship technology partner operating SimPPL, a research collective advancing digital trust and combating online misinformation. The Tachyon Team deploys, commercializes, and scales responsible computing systems, working on the "value chain" of misinformation: addressing the production, propagation, and mitigation of misleading claims and their effects. Our platform offers newsrooms the ability to understand their audiences better, helps civil society to identify superspreaders and coordinated networks on social media, and supports fact-checkers and intergovernmental agencies (UN) to counter the effects of exposure to such content, protecting vulnerable audiences.

SimPPL develops tools and programs to address misinformation across its "value chain": production, propagation, and mitigation. At the production stage, we design AI-enabled tools that support accurate reporting and audience engagement, empowering newsrooms to produce reliable, culturally relevant content. These tools help bridge the gap between content creators and their audiences, fostering trust in information ecosystems.

To tackle propagation, SimPPL deploys platforms like Parrot and Arbiter to identify coordinated disinformation networks. Parrot uses graph-based signals and temporal analysis to detect patterns on Twitter, while Arbiter extends this to cross-platform network analysis, uncovering influence campaigns and enabling actionable interventions.

In mitigation, SimPPL co-develops digital literacy initiatives tailored to local contexts. *Sakhi*, a WhatsApp-based platform, delivers verified maternal health information to underserved communities, ensuring accessible and reliable information.

SimPPL also trains youth through award-winning programs in responsible computing, equipping them with the skills to lead grassroots change sustainably.

Tachyon Labs (TL) operates SimPPL, a research collective, to develop tools that address misinformation across its "value chain"—production, propagation, and mitigation—with a focus on creating multilingual, culturally relevant solutions tailored to the global majority.

At the production stage, we design AI-enabled tools that help newsrooms produce accurate, audience-driven reporting. These tools analyze content trends and engagement metrics, ensuring that reliable information is disseminated effectively. By supporting content creators with actionable insights, we enhance trust in the information ecosystem.

To tackle propagation, TL deploys platforms like Parrot and Arbiter to identify coordinated disinformation networks. Parrot uses graph-based signals and temporal analysis to detect patterns such as same-second sharing on Twitter, while Arbiter extends this analysis across platforms like Meta, Telegram, and Truth Social. These tools uncover influence campaigns and superspreaders, enabling partners to take targeted action against disinformation.

In mitigation, TL co-develops digital literacy initiatives tailored to local contexts. For example, *Sakhi*, a WhatsApp-based platform, delivers verified maternal health information to underserved communities in their native languages. This approach ensures accessibility for populations often excluded from mainstream technology solutions.

TL also trains youth through award-winning education programs in responsible computing. These 9-month programs empower students to develop scalable AI solutions addressing misinformation while collaborating with international partners.

By combining cutting-edge technology with community-driven approaches, TL ensures that solutions are not only scalable but also deeply rooted in local needs. This holistic approach rebuilds digital trust, strengthens democracy, and counters the harms of GenAI-driven disinformation globally.

<https://github.com/SimPPL/parrot>

SimPPL uses Parrot to analyze coordinated behavior on Twitter by running large graph queries at scale on optimized entity-relationship graphs. Parrot processes datasets with 14 million accounts sharing 70 million tweets, enabling the detection of coordinated networks, such as same-second news-sharing patterns, robust up to a minute of delayed sharing for any two accounts among billions of pairs. It combines advanced network visualizations, temporal analysis, and develops novel content metrics to uncover coordinated campaigns. For example, Parrot identified Russian disinformation during the Ukraine war and flagged 400,000 accounts engaged in coordinated inauthentic behavior.

Arbiter, an extension of the Parrot system, scales this analysis to other platforms like Meta and Telegram. Arbiter analyzed 600 public pages and groups on Meta, leading to the takedown of a political harassment campaign targeting women and minority politicians in Bangladesh, which reached 95 million users. On Telegram, Arbiter tracked 4,500+ channels spreading pro-Russian disinformation, reaching over 50 million views.

These tools empower newsrooms, nonprofits, and intergovernmental agencies to monitor disinformation networks, measure their influence, and take actionable steps to rebuild digital trust.

**How you are using the technology(ies)?\***

TL leverages AI and large-scale graph analytics to tackle misinformation responsibly. Our systems integrate human-in-the-loop safeguards to ensure reliability and accessibility for end users. Using network analysis, we identify superspreaders and influencers driving misleading narratives, employing tools like Parrot and Arbiter to detect coordinated disinformation networks across platforms such as Twitter, Telegram, and Meta. These tools analyze graph-based signals, temporal patterns, and engagement metrics to uncover influence campaigns.

For content analysis, we deploy NLP tools to detect toxicity and propagandist speech, integrating inductive priors from domain experts to refine our models. Our focus on human-centered design ensures that all technologies are co-developed with grassroots civic organizations and tailored to local needs. For example, our multilingual GenAI chatbots are designed with target audiences in mind, incorporating user behaviors to enhance digital literacy interventions.

By combining cutting-edge AI with community-driven approaches, TL ensures scalable, culturally relevant solutions that rebuild digital trust globally.

Describe the results of your initial testing and prototyping (quantitative and qualitative):

TL’s tools have demonstrated significant impact through rigorous testing and prototyping across the misinformation value chain. At the production stage, our AI-enabled newsroom analytics platform was piloted with New York Public Radio, helping identify audience preferences and improve content engagement. This prototype is now being expanded to other newsrooms for broader adoption.

At the propagation stage, our platform Parrot identified coordinated disinformation networks on Twitter, analyzing 70M tweets from 14M accounts. Its cross-platform extension, Arbiter led to Meta removing 600 groups and pages targeting women politicians in Bangladesh, and extended these insights to Telegram, uncovering 4,500 channels spreading pro-Russian disinformation.

For mitigation, our Sakhi platform delivers verified maternal health information via WhatsApp in local languages, addressing outcomes at the grassroots level. Piloted with 300 families in India and Bangladesh, it is scaling to 5,000 families by mid-2025.

These prototypes combine advanced AI techniques with community-driven solutions, providing measurable impact globally.

**What are your project targets/milestones for the next 12 months?:\***

Current: Technology Development

Enhance Sakhi with gamified rewards and multimodal messaging.

Develop cross-platform dashboards for monitoring misinformation trends globally.

June 2025: Scaling Sakhi

Expand Sakhi, our multilingual digital literacy platform, across India and Bangladesh through partnerships with state governments and NGOs. Current pilots with 300 families will scale to 5,000 families, focusing on verified maternal health information delivery.

Oct 2025: Strengthening U.S. Partnerships

Collaborate with the Local Independent Online News (LION) network to deploy newsroom analytics tools for local newsrooms, enhancing content creation and audience engagement.

Expand Arbiter and Parrot platforms to analyze misinformation across Meta, Telegram, and Truth Social, targeting coordinated disinformation campaigns.

Jan 2026: Geographic Expansion

Enter Southeast Asia (e.g., Yonhap News) and Latin America (e.g., Fundamedios), leveraging prior discussions.

Co-develop GenAI tools for newsrooms and social listening platforms for fact-checkers.

Integrate human-in-the-loop safeguards into all AI tools to ensure reliability and accessibility.

**Who are your key partners and advisors (only list actual partners, write NA if non-existent)\***

Advisors:

Mukund Sudarshan - Tech Entrepreneur, Ph.D. (US)

Stacey Peters - Local News Veteran (US)

Rebecca Harvey - Online Harms and Trust and Safety, FCDO (UK govt.)

Sandra Khalil - Partnerships and Trust and Safety Lead, All Tech is Human (US)

Karan Dhabalia - Serial Tech Entrepreneur, Stripe (US)

Mansi Panchamia - Developmental Economist, World Bank (US)

Christian Schroeder - Postdoctoral Researcher, University of Oxford (UK)

Chirag Raman - Professor, TU Delft (NL)

Partners:

United Nations Office of the Secretary General; Peacekeeping Operations

Tech Global Institute, led by former Meta leads for Bangladesh

New York Public Radio, analyzing audiences for their Gothamist site

NEST Center for Journalism, advancing digital fact-checking for Mongolia

Spreeha Foundation, for digital healthcare in Bangladesh

Aadhar Bahuddeshiya Sanstha, for healthcare digitization in India

Oxford University Torr Vision Group

Boston University and MIT Professors

ADL Center for Tech and Society

Tattle Civic Technology, India

Just Rights for Children, India

**PITCH VIDEO FOR SIMPPL**

Misinformation is a global crisis, eroding trust in institutions and governance, with an annual economic toll of $78 billion. Generative AI has worsened this challenge, enabling scalable disinformation campaigns and deepfakes that undermine democracy. TL operates SimPPL to address these challenges by building multilingual, culturally relevant tools tailored to the global majority, empowering communities to rebuild digital trust.

What sets TL apart is our human-centered design approach. Our teams spend time in local communities—such as with healthcare workers in rural India and Bangladesh—to deeply understand their needs. This ensures our solutions are contextually relevant and impactful. For example, *Sakhi*, our WhatsApp-based health literacy platform, delivers verified maternal health information in local languages, earning the trust of underserved mothers and scaling to 5,000 families by mid-2025.

TL’s interdisciplinary expertise allows us to go beyond surface-level data analysis. Our platforms like *Parrot* and *Arbiter* analyze over half a billion posts across platforms such as Twitter, Meta, and Telegram. By combining cutting-edge technology with social science methods, we reveal the mechanics of influence operations and uncover deeply embedded disinformation networks active for over a decade. Platforms like Meta and X (Twitter) have acknowledged our insights, demonstrating the scalability and credibility of our approach.

Aligned with the UN’s focus on democracy, education, and digital trust, TL empowers communities to counter misinformation sustainably. By combining advanced technology with grassroots collaboration, we aim to foster resilient democracies globally. Thank you!