

Starling Lab:

Leveraging Blockchain to Preserve War Crime Evidence in Ukraine

Since the onset of the conflict in Ukraine, we have witnessed the unprecedented digitization of modern warfare, unfolding in real time. Amidst this backdrop, courageous humanitarians in Ukraine are on the front lines, risking their lives to meticulously document egregious war crimes. Leveraging cutting-edge blockchain technologies pioneered by the Starling Lab for Data Integrity, a distinguished academic research institution based in California, these valiant efforts are ensuring that the truth is preserved with unparalleled fidelity and integrity.

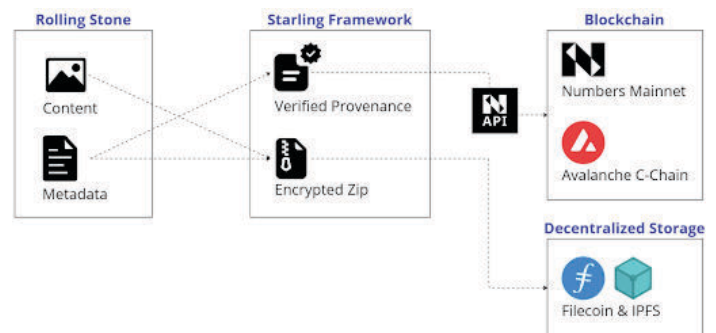
Born from a collaboration between Stanford University's Department of Electrical Engineering and the USC Shoah Foundation, Starling Lab pioneers the innovative use of decentralized technologies to safeguard the most sensitive digital records of our civilization. This story unfolds the profound impact of their mission, particularly in the harrowing context of Ukraine, where the echo of war crimes threatens to erode the fabric of humanity.



As the world's eyes turned towards Ukraine, amidst the despair and devastation wrought by conflict, Starling Lab embarked on a groundbreaking journey. The team, led by Jonathan Dotan, Adam Rose, and Basile Simon, envisioned leveraging cryptographic technologies not merely as tools for financial transactions but as pivotal instruments in the quest for justice and accountability. By bringing together some of the world's foremost technologists, Starling Lab pushed to advance human rights through technology by introducing a new paradigm in the documentation of war crimes, offering a glimmer of hope amid the war's dispare.

The initiative, named Project Dokaz, meaning "proof" in Ukrainian, epitomizes the lab's ethos and illuminates the technical innovations in use. When Russian military forces struck School 17 in Kharkiv with direct munitions, the technology developed by Starling Lab was used to secure evidence [filed as submissions](#) with International Criminal Court (ICC) prosecutors, helping the international community as it seeks transitional justice. The data collected underscores the chilling reality of Russia's deliberate targeting of schools as a strategy to dismantle the future of Ukraine's people. By documenting attacks on civilian targets like schools, Starling Lab's technology has become vital in revealing the depth of cruelty in this war.

The technology and methodology developed by Starling Lab is called the [Starling Framework](#) for Data Integrity, a sophisticated blend of cryptographic tools designed to capture, store, and verify digital evidence of war crimes. At the heart of it is a methodology for image authentication which incorporates cutting-edge standards in image encryption, decentralized web technologies, and web publishing, aiming to establish a verifiable chain of authenticity from the moment a digital asset (be it an image on a camera or webpage in a browser) is captured.



Graphic Credit: Starling Lab

This process is divided into three key steps:

Capture: Utilizing innovative camera technology, assets are fingerprinted at their source, securing a record of their contents, time, and location of capture.

Store: Leveraging decentralized web networks, multiple copies of an image are created and sealed to prevent tampering as they are distributed across the internet.

Verify: During the editorial process, any alteration to a photo's content is transparently recorded and displayed, ensuring a traceable history of modifications.

This approach not only safeguards the authenticity of digital records but also ensures their resilience against manipulation and censorship. By embedding these digital artifacts within the immutable fabric of the decentralized web, Starling Lab is pioneering a model for future-proofing evidence, empowering investigations and legal proceedings in international courts like the ICC.

One of the lab's significant milestones includes the [submission](#) of a comprehensive dossier to the ICC, detailing the systematic attacks on schools in Ukraine. This submission marks a historic moment, demonstrating the practical application of cryptographic evidence in legal contexts. The meticulous gathering of open-source intelligence, secured and authenticated through decentralized technologies, offers a new frontier in the pursuit of justice for war crimes.

Beyond the legal arena, Starling Labs' work transcends to the preservation of human memory and dignity. Collaborating with the MISW Museum, the lab undertakes the delicate task of immortalizing the voices of the youngest victims through their drawings. These poignant artifacts, encrypted and uploaded onto the decentralized web, serve as a testament to the resilience of the human spirit amidst adversity.

As Starling Lab continues to innovate and expand its reach, it remains a powerful example of how web3 technology can be a force for good. By confronting the challenges of misinformation, digital vulnerability, and the erasure of identity head-on, the lab not only seeks to document the atrocities of today but also to safeguard the historical narrative for future generations.

The story of Starling Lab is not just about the technology itself but about the human lives it seeks to protect and the hope it offers in the darkest of times. Through their work, the team at Starling Lab embodies the profound belief that amidst the turmoil and tragedy of war, technology can indeed be a beacon of light, guiding the way toward justice, accountability, and ultimately, peace.



Image Credit: Starling Lab