**The African continent, owing to its vast geographical scale and diversity, contains numerous regions where real-time monitoring remains practically unfeasible. This structural limitation continues to hinder the international community’s ability to respond swiftly to emerging humanitarian crises. In this context, we firmly believe that a technology-enabled early warning system represents not only an urgent necessity but also a highly pragmatic solution.**

**This concept—long in development—has recently reached a point of realistic feasibility, owing to advances in artificial intelligence and the availability of low-cost mobile technologies. We propose a lightweight, AI-powered surveillance framework that leverages affordable smartphones, enabling preventive action against potential large-scale human rights violations.**

**The proposed system operates through the voluntary submission of geolocation data by local residents. An embedded AI engine would then autonomously analyze the distribution and concentration patterns of the incoming coordinates to detect anomalies. While individual data points may be imprecise or even misreported, statistical reliability naturally emerges as volume increases, allowing the aggregated data to serve as credible first-level indicators.**

**This approach can serve as a critical complement to satellite reconnaissance, which, due to resource constraints, cannot provide continuous or wide-area coverage in real time. Importantly, deploying satellite assets typically requires a baseline level of preliminary evidence—an evidentiary threshold that this system could effectively help to meet.**

**To secure a more robust second layer of verification, we further propose the adapted use of decommissioned unmanned aerial vehicles—specifically, repurposed Bayraktar TB2 drones. When reconfigured without weapons and equipped with extended fuel capacity, these UAVs can achieve surveillance ranges of approximately 500 kilometers. By integrating expendable, low-cost civilian drones, they can further extend their monitoring capabilities to exceed 1,000 kilometers in total range.**

**Under this dual-drone framework, the smaller drone would be deployed as a one-time-use reconnaissance unit capable of discreetly recording audio and visual evidence in pre-identified high-risk zones. This indirect, non-intrusive method of verification can provide compelling second-tier evidence, thus substantiating the case for strategic satellite deployment.**

**In conclusion, this proposed system—anchored in sub-$20 AI-enabled smartphones and retrofitted long-range surveillance drones—offers a structured and scalable mechanism for collecting both primary coordinate data and secondary field evidence. Designed with non-commercial and non-military intentions, this initiative holds strong potential as a public-interest technology platform that may serve as the foundation for international cooperation in rights-based monitoring and early humanitarian intervention.**

**AI expressed this concern.**

**Your concept is remarkably original and, in many respects, demonstrates a realistic potential for implementation. However, prior to operationalization, several key elements should be logically structured and supported by institutional, ethical, and technical foundations in order to ensure legitimacy and acceptance by the international community. In that spirit, I offer the following analysis:**

**It is widely acknowledged within the international community that maintaining fixed, continuous surveillance across the African continent is virtually unfeasible. Satellite surveillance, while valuable, is prohibitively expensive and limited in both resolution and frequency, making it inadequate for sustained, localized monitoring. Therefore, I fully agree with the necessity of a field-based information collection system as a complementary solution.**

**The proposal to equip low-cost smartphones (approximately $20) with geolocation transmission capabilities and basic AI analysis is technically feasible. In fact, there have already been pilot initiatives in countries such as Kenya and Nigeria, using inexpensive smartphones for public health monitoring and the transmission of agricultural geodata. That said, for AI to automatically assess or validate the authenticity of coordinates, preliminary systems such as local-level labeling, trust assessment algorithms, and data clustering techniques would need to be in place.**

**The argument that coordinate data, when accumulated in sufficient quantity, can serve as a reliable form of primary evidence is valid from a statistical detection standpoint. For instance, if coordinates are concentrated within a specific region and time window, abnormal patterns could be identified. However, for such data to be accepted as legal evidence by the international community, a multi-layered verification framework is essential—this includes the integrity of metadata, security of transmission pathways, and safeguards against misuse.**

**The conceptual use of second-hand Bayraktar TB2 drones as a secondary verification tool is technically plausible, but its feasibility is highly contingent upon political and military considerations—such as Turkish export permissions, allowance for modifications, and potential diplomatic frictions during airspace transit. The idea of using a "drone within a drone" model—where a civilian UAV is deployed from a larger platform for long-range surveillance—is technologically achievable, though it hinges on secure communications and precision landing.**

**The concept of dropping disposable civilian drones to collect surveillance footage and subsequently decommission them requires both ethical justification and technological execution. While the overarching aim—preventing mass atrocities—is clearly grounded in public interest, there are substantial risks related to the rights of those under surveillance, unauthorized use of imagery, and possible diplomatic incidents in cases of false detection.**

**The assertion that preliminary evidence is needed to trigger satellite reconnaissance is both logical and grounded in current practice. International organizations such as the United Nations, the EU External Action Service, and the African Union typically require verified ground-level data before mobilizing assets. Your proposal could function as an upstream layer in that ecosystem—offering a decentralized civilian monitoring network with meaningful early-warning capabilities.**

**In conclusion, this idea is technically viable and has the potential to serve as a critical component of an early-warning system against mass atrocities. However, the following conditions must be addressed to ensure its responsible implementation:**

1. **Development of robust data security and validation mechanisms,**
2. **Legal grounding for drone-based civilian surveillance,**
3. **Establishment of collaborative frameworks with international NGOs and civil society,**
4. **Institutionalization of procedures for requesting satellite imagery based on field data.**

**If your intention is to enable the surveillance of otherwise inaccessible regions through human-coordinated, AI-assisted methods, then this concept clearly holds strategic value. Even at this stage, the proposal could be developed into a credible diplomatic and technological briefing. Should you wish, I would be glad to assist in further structuring the technical requirements, legal framework, or budgetary design to bring it to the next level.**

**The twenty-dollar AI smartphone I am envisioning can be used not only to monitor human rights violations, but also to save lives. This device functions like a radio, capable of sending SOS distress signals even without access to electricity or a telecommunications network. I would be grateful for the opportunity to share the full system with you. It is essential that the entire proposal is reviewed from beginning to end in order to fully understand how this smartphone can be brought to life. The document is 100 pages in total.**

**Gyu-min Jeon**



**I am a citizen of the Republic of Korea with a strong personal commitment to child safety and children’s rights. As an uncle to my only nephew, I have come to realize how deeply vulnerable children are in today’s world—especially in regions where basic protections do not exist.**

**Motivated by this conviction, I hope to dedicate the remainder of my life to protecting the lives, dignity, and rights of children in crisis. I am especially drawn to the urgent needs of children in Africa, where countless young lives are endangered by poverty, violence, and lack of access to basic infrastructure.**

**Proposal for Deploying Decentralized Survival Communication Terminals in Remote African Regions**

**I hope this message finds you well. I am writing to share a humanitarian solution that may be of urgent relevance to your field operations in Africa—particularly in regions without electricity, internet, or communication infrastructure.**

**I have developed a fully designed, ready-to-deploy radio-based device that functions as a mesh-enabled survival terminal. This system does not rely on cell towers or satellites, and it is powered entirely by solar energy.**

**The two key objectives are:**

**1. To save lives by helping people locate water sources and critical aid points.**

**NGOs who dig wells or distribute food can instantly notify surrounding villages through broadcast signals. Villagers can also voluntarily share the location of clean water or food without needing literacy or smartphones.**

**2. To prevent and report atrocities before they are erased.**

**Residents who witness acts of violence, exploitation, or military raids(massacre) can use the device to send anonymous alerts. These signals can be relayed across dozens of kilometers—even without internet access—functioning as a digital witness system that preserves real-time evidence.**

**Each device costs less than $30 to manufacture and requires only sunlight and human presence to operate. Its minimal UI is number-based, allowing even illiterate users or young children to send and receive essential messages.**

**I am not asking for funding. What I seek is collaboration—specifically with NGOs capable of deploying and managing these networks in the field. I believe this system could dramatically improve real-time awareness, human security, and dignity across the most disconnected regions of the continent.**

**I currently have a highly detailed proposal exceeding 100 pages in length. So far, I have only shared about 10 pages. The full document is written in Korean, but if you are interested, I am willing to translate the entire proposal into English and deliver it in the form of a complete proposal document.**

**I am willing to develop my current Korean-language notes into a full proposal and formal project document. If you are able to introduce an angel investor who values human rights, I would be glad to submit the complete proposal.**

**The “African Smart Wireless Terminal” (commonly referred to as the African Smart Phone) that I propose is a survival-oriented communication device designed specifically for rural communities in Africa where electricity, internet, and medical infrastructure are virtually nonexistent.**

**This is not a conventional smartphone. It is more akin to a smart radio device, equipped with an independent communication network, solar-powered self-charging capabilities, and the ability to function without any base station.**

**Its primary purpose is to ensure that even children in the most remote regions of Africa can call for help, communicate, receive medical information, and ultimately survive in times of crisis.**

**This is a new kind of device that does not yet exist anywhere in the world.**

**Technologies such as LoRa, Mesh, and solar power have long been available, but no country has yet integrated them into a complete system that combines humanitarian networking, social ethics, regional cooperation, and base station-free autonomous communication.**

**Although the device resembles a smartphone on the outside, it is essentially an offline wireless network node.**

**Its key functions include the following.**

**Each device acts as a relay station without the need for external infrastructure, and the more users there are, the wider the coverage becomes.**

**It requires no electricity supply, operating all day with solar charging.**

**Using LoRa and Bluetooth Mesh technology, the device automatically connects with nearby users to transmit messages, voice signals, and location data.**

**All applications use a simple numeric code system (for example, 01 = fever, 02 = water shortage), allowing even illiterate individuals or young children to use it with ease.**

**Every device comes preloaded with medical modules connected to NGOs, enabling automatic reception of emergency alerts and healthcare instructions.**

**Information sharing is voluntary, giving users full control over whether to share their location or participate in community communications.**

**This is not merely a piece of equipment—it represents a new social infrastructure: a system built on information self-reliance, humanitarian leadership, survival sharing, and the freedom to communicate.**

**This is not about charity. It is the realization of trust and hope.**

**How will the African Smart Phone change the world?**

**In Africa, millions of people live without electricity, internet, or access to healthcare.**

**When a child is struck with a high fever, a woman faces complications during childbirth, food becomes scarce, or armed groups attack a village, there is no way for people to call for help.**

**Existing smartphones are useless in these circumstances—without power, without signal, and without repair resources, they are nothing more than dead weight.**

**But the African Smart Phone I propose changes this reality entirely.**

**When a child has a fever, a mother can press "01" and nearby medical volunteers or NGO doctors will receive the signal and respond with emergency instructions.**

**When a village discovers a source of clean water or food, they can choose to share the location so that nearby families in need can benefit.**

**Witnesses to acts of violence, theft, or military aggression can anonymously report the incident to NGOs or media networks.**

**When NGOs set up temporary clinics or food distribution points, all devices within several kilometers will automatically receive broadcast updates.**

**All of these functions are possible without base stations, telecom operators, data centers, or satellites.**

**All it takes is one person, one device, and one ray of sunlight.**

**Proposal Summary: African Smart Wireless Terminal  
Proposal Objective:To establish a dignity-centered communication infrastructure that enables rural populations in Africa—where electricity, internet, and medical access are absent—to safely exchange life-saving information.**

**1. Core Concept: Looks Like a Smartphone, Functions Like a Radio**

**The African Smart Wireless Terminal resembles a regular smartphone in appearance but functions as a radio-based communication device designed for survival.  
Each unit is assigned a unique frequency in the form of a digital ID, which is permanently fixed and cannot be altered.  
For example, a frequency like “131414#” is clearly displayed on the device, allowing users to easily recognize and confirm their personal identifier.**

**2. Decentralized Communication Without Base Stations: More Users, Wider Reach**

**Each device serves as a miniature base station, forming a self-sustaining network without the need for antennas or traditional telecom infrastructure.  
The system functions as a mesh network, expanding its coverage based on user density.  
If two users are located approximately 1 km apart, they can communicate directly. If there are users with devices at 2–3 km intervals, the entire region forms an extended, connected communication web.**

**3. Solar-Powered Energy Independence**

**The device does not rely on conventional electricity. It charges via a small, built-in solar panel.  
This design is optimized for Africa’s abundant sunlight, enabling stable usage in off-grid environments.  
Similar solar-powered radios, lights, and chargers have already been successfully distributed by NGOs, proving the practicality of this approach.**

**4. OS and App Structure: Linux-Based System with Bluetooth and Radio Transmission**

**Instead of Android or iOS, the device uses a Linux-based, customizable open-source OS.  
Apps can be transferred and installed via radio or Bluetooth without requiring internet access.  
Most applications use a simple numeric command system—for example, “01 = fever,” “02 = water shortage”—allowing ease of use for illiterate individuals or young children.**

**5. Key Use Cases**

**Sharing the locations of clean water, food, or firewood among village residents**

**Requesting basic first aid from nearby healthcare workers or NGO doctors**

**Reporting human rights violations such as massacres or looting anonymously to NGOs**

**Enabling communication among residents who do not own smartphones, reducing misunderstandings and preventing intergroup conflict**

**6. Feasibility Assessment**

**● Technical Feasibility**

**LoRa, BLE Mesh, and P2P technologies are already commercially available. A radio-based smart device is technically realistic.**

**Unique frequencies can be implemented via digital software IDs, ensuring user authenticity and security.**

**App transmission via Bluetooth has been successfully demonstrated in apps like Briar. Solar charging is also a mature and widely used technology.**

**● Social Feasibility**

**Strongly persuasive in humanitarian contexts: bridging communication gaps, enabling emergency response, and expanding access to information rights.**

**The narrative “One device = one life’s right to communicate” resonates with ethical marketing and ESG initiatives.**

**Caution is needed in certain regions where radio use could be misinterpreted as surveillance; local education and NGO partnerships are essential.**

**● Economic Sustainability**

**Device component costs can be kept around $20–30, making large-scale production feasible. Subsidies can be secured through donation-based models or partnerships with high-income countries.**

**In the long term, local repair hubs and community-managed maintenance systems can be established through regional NGOs.**

**Aligns with CSR initiatives, social entrepreneurship, and open technology grants.**

**7. Requirements and Implementation Conditions**

**Partnerships with mesh communication and solar hardware developers**

**Agreements with African local NGOs and community stakeholders for joint management**

**Ecosystem-level planning for training, maintenance, and app operations**

**Security protocols and policies to prevent misuse in politically sensitive regions**

**Conclusion:  
This proposal is technologically viable and grounded in humanitarian values. It has strong social utility and can be effectively implemented through collaboration with NGOs, businesses, and civil society.**

**1. Design Principle: A Radio, Not a Smartphone — Simplicity for Everyone**

**The African smart terminal is designed to look like a smartphonebut function as a radio-based communication device.**

**It includes only a numeric keypad and a low-resolution display, allowing anyone to use it regardless of literacy.**

**All applications are based on simple numeric commands, and users operate the device by physically pressing number keys.**

**The device is intentionally limited to essential survival communication functions such as non-voice radio calls, preset-response messaging, and optional location sharing.**

**2. Functional Overview**

**Radio-Based Calling Function  
Users can input numeric frequencies to directly connect with others.  
Each device is assigned a unique, unchangeable frequency (e.g., 131414#) for identification and communication.**

**Simple Communication App Structure  
Symbolic messages like “01 = fever,” “02 = water shortage,” and “03 = danger” can be transmitted.  
Button-based responses like Yes/No or “Need help / I’m okay” are also supported.**

**Automatic App Installation and Deletion  
Apps are updated automatically through peer-to-peer radio transmission (P2P or LoRa), without any internet or central server.  
When transmitted from a designated frequency, the app is propagated and deleted across nearby devices.  
Only NGO-approved apps can be installed through a signature-based admin authentication system.**

**Nearby User Detection and Blocking  
The device can detect and display a list of nearby users (e.g., “5 users nearby”) along with their frequency IDs.  
Users can block others to avoid conflict or for safety purposes.**

**Optional Location Sharing  
Location data can be shared through GPS or simplified local ID codes.  
Users have full control over whether to share their location (default is private).**

**Receiving NGO Location Alerts  
When NGOs send updates about water sources, oases, or medical posts, all nearby devices automatically display a broadcast alert (e.g., “Food delivery has arrived in Village 02”).**

**3. Social Value and Impact**

**Bridging the Information Divide:Enables participation even without smartphones.**

**Literacy-Independent:Uses numbers and icons for accessible communication.**

**Emergency Response:Supports rapid alerts in health crises, water shortages, and danger situations.**

**Respect for Privacy:Users control location sharing, enhancing data sovereignty.**

**Conflict Prevention:Helps prevent misunderstandings and tribal disputes through clear communication.**

**NGO Collaboration:Facilitates efficient information dissemination and real-time feedback collection in field operations.**

**4. Technical Feasibility**

**Hardware:Low-spec CPU, LoRa/Bluetooth chipset, solar panel, and numeric keypad can be integrated into a custom-designed device.**

**Operating System:Custom Linux-based OS or lightweight Android Open Source Project (AOSP) variant can be used.**

**Communication Protocols:Technologies such as LoRa, BLE Mesh, or Wi-Fi Direct can be selected based on the deployment environment.**

**Security:App authentication through public-key encryption and administrator-controlled frequency protocols can prevent tampering.**

**5. Implementation Requirements and Strategic Approach**

**Technology Partnerships:Collaborate with manufacturers of LoRa modules, solar components, and low-power SoCs.**

**Local Agreements:Establish execution agreements with African NGOs and community stakeholders.**

**Operational Pipeline:Manufacture devices → distribute locally → provide user training → develop regional management structures.**

**Field Testing:Launch pilot programs that reflect linguistic, cultural, and technological realities of target communities.**

**Distribution Strategy:Promote through the message “One Device = One Life’s Right to Communicate” to attract social funding and CSR partnerships.**

**Proposal Title: Wireless Communication Without Base Stations – A Mesh-Driven Expansion Model for the African Smart Phone**

**Proposal Objective:  
This proposal presents a radio-based smart terminal (Mesh-enabled LoRa device) model that can autonomously expand communication networks in rural and isolated regions of Africa without relying on base stations or internet infrastructure. The document evaluates the technical feasibility of this model and its potential for realistic manufacturing and distribution.**

**1. Core Concept: A Network That Grows with Its Users**

**The African smart phone envisioned here operates like a radio-enabled communication device, where each unit functions as a node that connects directly to nearby devices and relays messages through intermediate nodes using a Mesh network structure.**

**In essence, as more people use the device, the communication coverage expands exponentially. This allows for multi-kilometer-range communication even in the complete absence of telecom towers or internet infrastructure.**

**2. Core Technology: Mesh Network-Based Communication Architecture**

**● What is a Mesh Network?  
Each device acts as both a transmitter and receiver, enabling direct communication between users without the need for a centralized base station.  
Messages are relayed step-by-step through the nearest devices until they reach the intended recipient.  
The more devices in the network, the denser and more stable the communication system becomes.**

**● Applicable Technologies**

**LoRa (Low Power, Long Range):Enables long-range communication (5–15 km) with minimal power consumption, ideal for areas without infrastructure.**

**Bluetooth Mesh:Provides fast, low-power connectivity at short range.**

**Wi-Fi Direct / Wi-Fi Mesh:Suitable for mid-range, high-speed local networking.**

**Commercial Use Cases:Devices like GoTenna, Sonnet, and Beartooth are already in use in the U.S. as radio-based smart devices.**

**By combining these technologies, the African smart phone can provide both communication capabilities and self-expanding network functionality.**

**3. Feasibility Assessment of the Proposed Model**

**● Solar Charging:  
LoRa’s ultra-low power consumption allows for reliable charging through compact solar panels—well-suited to African climates.**

**● Numeric Code-Based Messaging Without Apps:  
Users can send and receive simple numeric messages without apps (e.g., 01 = fever, 02 = danger, 03 = SOS), making it usable even by children or people with low literacy.**

**● Network Expansion Through Device Proliferation:  
As more devices are distributed, each becomes a relay node, expanding the overall coverage. However, intermediate nodes are required if distances exceed communication limits.**

**4. Technical Challenges and Requirements**

**● Node Distance Limitation:  
For LoRa, devices must be within 5–15 km of each other for stable transmission.**

**● Message Latency:  
As the number of relay nodes increases, message delays may occur—thus a simple messaging format is preferred.**

**● Security Considerations:  
Basic public-key encryption and frequency collision prevention mechanisms are required to ensure privacy and resilience.**

**● Device Manufacturing Cost:  
A basic Android-level hardware setup with LoRa module and solar charging functionality is estimated to cost around $40–60 per unit.**

**5. Summary and Conclusion**

**The African smart phone, as conceptualized by the user, is technically feasible when integrating Mesh networking, LoRa communication, and solar charging.  
This model offers a highly efficient and sustainable infrastructure, where network coverage grows naturally with device adoption.**

**Even in regions without internet or telecom towers, it enables village-scale communication ecosystems. With support from NGOs, UN agencies, and local governments, this device can be widely deployed for emergency response, survival information exchange, and real-time human rights reporting.**

**Proposal Title:Long-Distance Communication Without Base Stations – Evaluating the Scalability of the African Smart Phone Using LoRa Mesh Technology**

**Proposal Objective:  
This proposal explores the feasibility of establishing long-distance communication—spanning hundreds of kilometers—without base stations, internet, or satellite infrastructure. By leveraging LoRa Mesh technology and distributing devices at fixed intervals, we assess the potential of this system to serve as a practical communication solution in rural and infrastructure-less regions of Africa.**

**1. Central Question:**

**Can African smart phones placed every 5 kilometers enable communication over hundreds of kilometers?**

**Example scenario:  
A user at the 1 km mark sends a message → intermediary users with smart phones at 5 km, 10 km, 15 km, and so on → user at 100 km or 200 km receives the message.**

**Answer:Theoretically, yes—it is possible.**

**2. Technical Basis: LoRa Mesh Network Architecture**

**LoRa (Long Range) communicationsupports up to 15 km in open terrain and 2–5 km in dense forests or areas with physical obstacles.**

**LoRa Meshenables message transmission through a relay of devices.**

**Each African smart phone acts as a node, passing messages from one device to the next across vast distances.**

**Example calculation:**

**With nodes placed every 5 km,**

**Reaching 100 km requires approximately 20 nodes.**

**Reaching 200 km requires about 40 nodes.**

**3. Implementation Requirements and Conditions**

**Maintaining Continuous Connectivity**

**All intermediary nodes must remain powered on.**

**Solar charging ensures energy self-sufficiency.**

**Devices must receive and forward messages automatically in low-power standby mode.**

**Text-Based, Low-Bandwidth Messaging**

**LoRa is a low-speed communication protocol.**

**Not suitable for voice calls; ideal for short text messages.**

**Best used for SOS alerts, location coordinates, rescue instructions, and simple commands.**

**Geographic and Environmental Considerations**

**Performance is optimal in open plains, highlands, and deserts.**

**Coverage is reduced in dense jungles or urban areas with significant obstacles.**

**Message Delay Considerations**

**Messages passing through 20–40 nodes may experience delays ranging from seconds to several minutes.**

**The system should be designed as a non-real-time communication solution for greater reliability.**

**4. Potential Social Applications**

**Disaster and Humanitarian Response**

**Enables the transmission of emergency instructions, water locations, and medical information when conventional networks are down.**

**Cross-Border Communication**

**Allows NGOs to communicate across regions where government-controlled networks are blocked or censored.**

**Local Information-Sharing Networks**

**Supports village-to-village sharing of survival data, disease alerts, refugee tracking, and other forms of community-level coordination.**

**Human Rights Monitoring and Testimony**

**Witnesses to violence or abuse can send real-time reports and geolocated testimonies through the mesh system, even in blackout zones.**

**5. Conclusion**

**If African smart phones are equipped with LoRa Mesh capabilities and deployed at intervals of 5 kilometers, it is entirely feasible to form a functioning communication network over distances of 100 to 200 kilometers.**

**This model may become the only viable communication systemin areas lacking all forms of conventional infrastructure. It offers a powerful solution for emergency coordination, humanitarian outreach, and the protection of information sovereignty in fragile environments.**