

DicerOS Submission to the 1st National Rhino Conservation Dialogue
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Increased Use of Technology to Combat Current Rhino Poaching Crisis in Southern Africa.

Many current on-the-ground anti-poaching techniques rely on reactive measures to locate and apprehend poachers. DicerOS propose a pro-active approach to anti-poaching, by targeting a threat before it has entered a sensitive zone. This enables us to repel the threat before they are able to do damage, while also relieving the hassles of apprehending and prosecuting poachers.

DicerOS, a collaboration between Stone Holdings, a specialist security design and concept company, and wildlife conservation organisation Wildlife ACT, has been successful in obtaining licensing for U.S. Military radar and surveillance technology, primarily sourced from Telephonics Corporation, a Griffon Company, which has over fifty years of history developing and deploying ground surveillance radars and integrated surveillance systems.

DicerOS identified Telephonics radar systems since they have evolved and produced several thousand ground surveillance systems for the U.S. military mission specific requirements, such as security around military facilities and secure forward deployed forces. Their current radar model (ARSS) is currently successfully operating in Afghanistan and Iraq, identifying a person walking up to 12 km away and vehicles up to 30km away, including aerial vehicles. DicerOS's integrated surveillance systems provide a versatile capability to identify potential threats to the Rhino population by combining the capability of radars to cover a broad area with other sensors, including affordable Unmanned Aerial Vehicles (UAVs) with long-range and high-load capabilities. After an animal or person is detected with either the radar or UAVs, thermal / optical sensors can be precisely positioned with the push of a button to quickly determine the nature of the threats and track them. Another proactive sensor are the inexpensive Under-Ground Sensors (UGS) which detect people walking over them with metallic weapons. With incredible fidelity, this suite of sensors will become a second force multiplier by providing a capability to characterize the return and determine whether a response team is needed.

Integrated surveillance systems, specifically the ARSS, may be mounted on towers, tri-pods, and vehicles to provide data to a common command center or a mobile system can operate independently. The vehicle based Mobile Surveillance Capability (MSC) includes a radar, infra-red sensor, electro-optical (low-light) sensor and a daylight sensor, a laser range finder and a GPS. The unit is self powered by its on-board generator and fuel storage. Inside the vehicle, there is a command module that can be integrated with other sensors. The MSC equipment is completely self-contained. Precise, configurable, easy use and deployment means this flexibility precludes poachers from gaining advantage by simply changing routes to avoid detection.

The most important point is that we do not propose that this is a complete solution to the current crisis, but a critical aspect which could see a decrease in poaching attempts on the ground. We propose that this forum identifies, as a priority, a means of engaging with countries of end-users to reduce and police the demand in Asia more effectively. As such DicerOS supports the campaign proposed by Rhino Reality team members. We propose our DicerOS surveillance solution to protect our natural heritage while this more long-lasting solution is developed.

In Summary

1. Many aspects of the anti-poaching mission are identical to military force protection, homeland security border surveillance and critical infrastructure protection – the Telephonics and other sensors DicerOS has identified has been proven an invaluable tool set for these missions globally.
2. The system flexibility and ease of use demonstrated in the rapid development and deployment of MSC for current and future threats is essential to keep apace innovative and well-funded poachers.
3. Telephonics products, with a 50+ year heritage of success in delivering sophisticated, yet easy to use integrated surveillance systems are the right entity for South Africa to be engaging with in sourcing a high-tech anti-poaching solution.