Rhino Security, Monitoring and Management System

The Wireless Wildlife Rhino system was designed to enable the rhino owner to protect, manage and monitor their investment in wildlife in real time, 24 hours per day and to assist in the conservation of the specie. The system has an build alarm functionality that alerts the user as soon as the rhino shows any sign of abnormal behaviour or ventures out of pre-set geographical borders.

The system was also designed for research application where the behavioural patterns of rhinos can be monitored. Data such as activity, location, speed, velocity, direction of movement and temperature are stored and can be downloaded for these purposes.

The system was designed to accommodate the private owner, wildlife institutes as well as research organizations.

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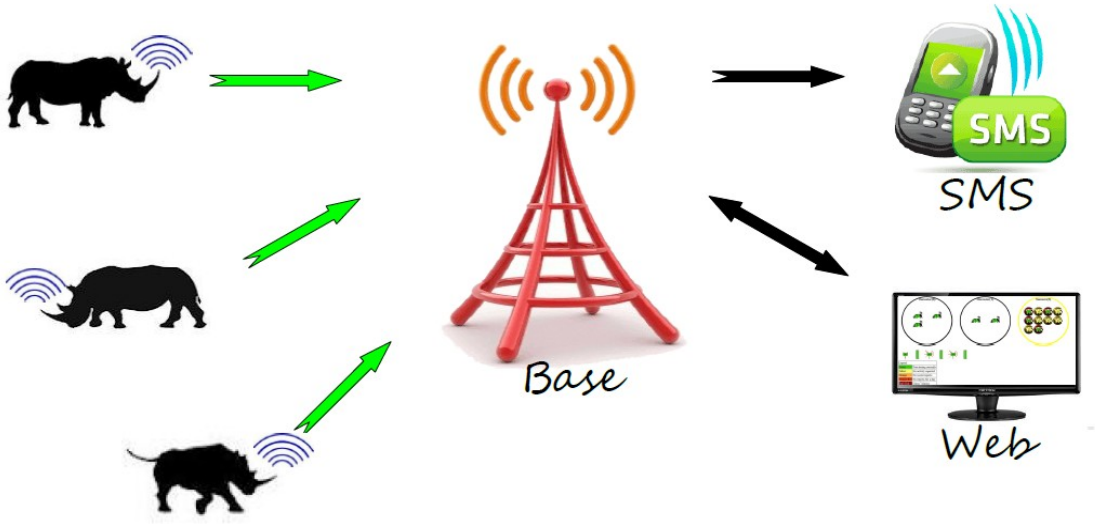
Wireless
WILDLIFE

Security System Overview



The system consists of 2 parts. The first part is the GPS RHINO MONITORING DEVICE that is implanted inside the rhino horn. This device monitors the rhino and is in constant communication with a BASE STATION.

The second part a mentioned is the BASE STATION that is erected in the roaming area of the rhino. This station generates the coverage on which the GPS RHINO MONITORING DEVICE operates.

The GPS RHINO MONITORING DEVICE sends all alarms, notifications and data through to the BASE STATION, which then distributes it to the user. The system coverage can be extended by a RELAY STATION. A RELAY STATION can be erected in another area and relays all data received from GPS RHINO MONITORING DEVICES to the BASE STATION for distribution to the user.

Users will receive real time alarms by means of SMS and missed calls and all data are made available through a secure web interface. Alarms will include abnormal rhino activity (chased, threatened, stationary for too long) or if the rhino moves into or out of a specified zone (breaking fence).

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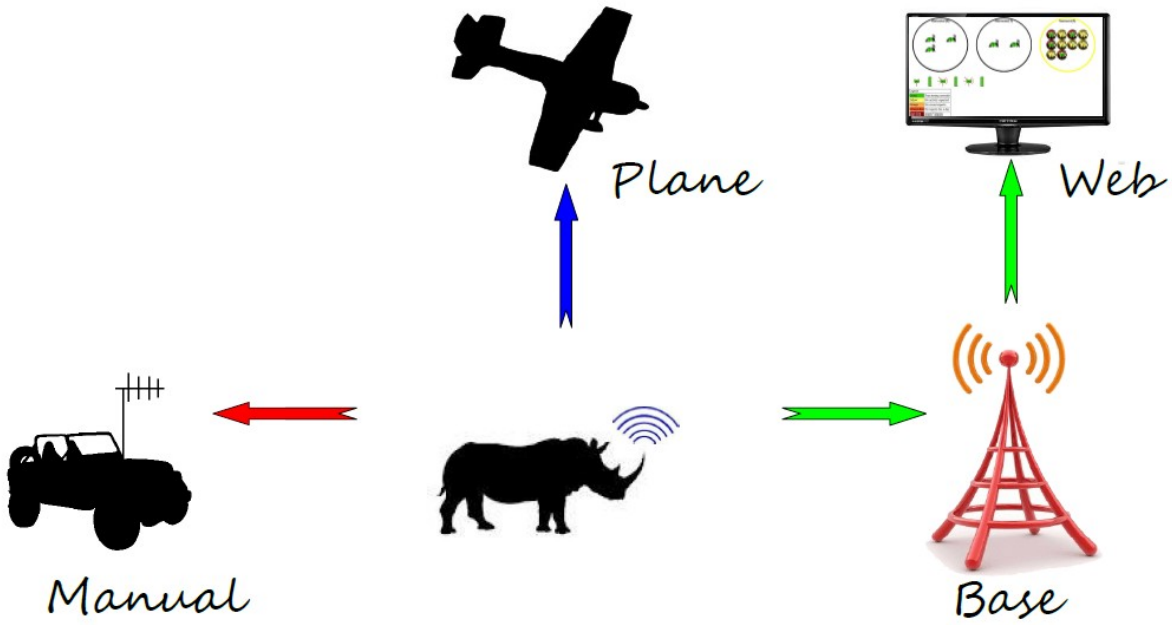
Research System Overview



The same GPS RHINO MONITORING DEVICE that is used for security purposes, are implemented for research applications.

The system layout that is used in the Security System application, can also be used for researchers to download and access behavioural data. Base stations can be erected at strategic points in the research area and as soon as the rhino moves into coverage of the base station, the data will be downloaded to be accessed through a secure web interface.

Alternatively researchers can be supplied with a manual download console. This enables data to be downloaded from the rhino by means of a manual field download technique or by plane. Wireless Wildlife has had great success by downloading data by means of a model plane with a build in manual download console.

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Locating or VHF tracking the Rhino

GPS-On-Demand

The system offers the "GPS on demand" functionality where in-time GPS location from the GPS RHINO MONITORING DEVICE can be requested using a manual receiver or your cellular phone if the area is covered by our infrastructure. This can be done simultaneously for multiple tagged rhinos from ground or air and will take about 5 minutes to receive the coordinates.

VHF Tracking

Although rarely used within this system, the system has the capability and also offers digital VHF tracking technology. This can be used in cases when The GPS RHINO MONITORING DEVICE can not get a GPS fix. The user can then search for the animal with a directional antenna.

It process is done digitally, so no need to search through VHF channels. The device also only transmits these tracking signals when you request it and not continuously for anyone who has a standard VHF receiver to receive. (quite important for security applications)

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