Deer hunters spend a tremendous amount of time preparing for a very short season. This includes time spent placing feeders, keeping these feeders supplied, and tracking deer activity. One of the most time consuming and error prone tasks is the tracking of deer activity. Currently, cameras are utilized to take photos of deer and these photos are a single snapshot with a date / time stamp. These photos are triggered through a sensor that detects movement but once the sensor has detected movement and fired the camera, it resets and then will fire again after a set time if movement is detected again. In order to gather these photos, hunters must travel to each camera and download the pictures from an SD card located in each camera. Then they must review the photos to determine the date / time, number of deer captured in the photo, and accumulate this data manually. The proposed product is a smart connected deer camera. This product would provide push notifications to an app when movement is detected and allow real-time camera access to see the deer live and in real-time. The images would also be recorded on the SD card as well for historical access. In addition, data would be recorded for the date and time of the activity as well as using the motion detector to record how long the deer stay in the area. The app would also provide the ability to remotely access and manage the SD card to download the images and clear the card without having to travel to each camera, manually remove the SD card, download the images to another device, then clear and reload the SD card into the camera. The smart connected deer camera would not only allow the hunter to be notified when movement was detected but also provide real-time access to the camera for a live view, provide summary statistics, over time, of deer activity. This would help the hunter to pin point the time of most activity and the days of the most activity. This data can also be combined with moon phases to help further determine movement characteristics. All this together will help the hunter in stand placement and determining the time of day and days, based on moon phase, he or she has the best chance to bag that big trophy buck. One last note… for the non-hunter, hunting is not allowed at night and the moon phase is included because it drives the characteristics of movement for deer during the early morning and late afternoons, which are prime hunting times.

Details for the SCP framework:

Product Infrastructure: Infrared Camera, Motion Sensor, Watertight Compartment, Power Supply (Batteries), Micro Processor, Cellular Transmitter, Code to capture time series data, communicate via the cellular transmitter, control the SD card.

Sensor: Motion Sensor, Infrared Camera

Connectivity: Cellular

Analytics: Data pool will be generated, transmitted, and recorded. From the data pool a time series analysis will be created showing

deer activity over date / time and plot this against the moon phases for the same time period.

Apps: App to be utilized to allow push notifications when motion is detected by the camera and allow real-time connection to the camera when notifications are sent or at any time the user desires. This app will also be able to access the SD card to review historical images, download those images to the user's phone, and allow resetting / reformatting of the SD card. There will also be functionality provided to show accumulated data over a time series chart reflecting when deer were detected, how long they were present, and what the moon phase was for each timeframe.