

Cochise County Sheriff's Office utilization of Buckeye cameras system and image processing.

Requirements for processing the imagery received from the fielded BuckEye cameras

Problem statement: More than 90% of all images received from the deployed BuckEye camera system is false alerts, resulted from movement of vegetation and wildlife in close proximity from the camera sensors. That results in significant distraction and loss of time for the officers who receive all of these unprocessed images instead of getting only the imagery that can provide actionable intelligence. In the last 12 months the department was looking for a solution that would substantially reduce the cognitive load and wasted time for the department personnel directly involved in operations on the border. In the search process the department was able to solidify the requirements for such system and those were used in the search for technology available on the market.

Requirements

The computer vision system shall be able to collect and process all imagery that is generated by the county wide deployment of the BuckEye cameras and create alerts for the images that may be actionable.

The system shall be able to adapt to the specific environmental conditions and be able to differentiate images of people captured by the Buckeye cameras in daylight and infrared 24/7

To reduce the acquisition risk the system should be at least Technology Readiness Level 8 (TRL-8), i.e. completed and mission qualified through and demonstration and ideally, TRL-9, i.e. proven through successful mission operations in the area of responsibility (Cochise County) or similar conditions and terrain (Santa Cruz, Pima, Pinal, Hidalgo)

Cloud interface is not necessary but highly desirable so that the selected technology provider can support and maintain the system without any additional support from the Sheriff's Office and to avoid additional travel and other expenses, usually associated with the new system acquisition and operations.

Recommended Sole Source justification.

During the extensive search made by the Department, and in response to the Cochise request, Border Commerce and Security Council suggested to contact Cogniac Corporation that has conducted extensive tests with the Department of Defense, works closely with DHS, and may be suitable to provide the solution. After the Sheriff's Office had contacted Cogniac, they agreed to a 30 day pilot deployment at no cost to the county government. Such cloud-based deployment was done within days and Cogniac demonstrated the ability to train the system recognize threats and filter out false alarms to the level acceptable to the Department. In addition, the Cogniac solution does not require procurement of any additional hardware and software to support the mission, as well as offering us a scalable solution to support up to 300 cameras and increased imagery flow at no additional cost.

Based on the pilot that began on June 28 and successfully completed on July 30, 2018 and meeting the department requirements, we intend to award a firm fixed price sole source purchase order on behalf of the Cochise County Sheriff's office as it is only one source (Cogniac) reasonably available that will satisfy all of the requirements.