TACTICAL CANINE SYSTEMS

INTRODUCTION

Canine units play an essential role in civil protection, security, and military operations, demonstrating abilities that often exceed those of human counterparts in tasks like search and rescue, detecting hazardous materials, and tracking. However, these dogs face significant dangers in the field. Despite their importance, there are limited solutions that integrate multiple tools designed specifically to meet the physical demands of dogs in high-risk situations and ensure their wellbeing. We, as a team, developed a technology equipped vest/helmet with real-time location tracking, video streaming could greatly enhance their operational performance and safety.

FEATURES

- GPS track in real time
- Camera with the dog´s point of view
- Sensores of the dog´s surrounding (temperature, pressure, humidity)

PROTOTYPE

This project integrates an external camera, a GPS module, and sensors, such as, temperature, gas, pressure, into a durable and ergonomic vest for police dogs. The system will enable real-time monitoring of the environment and the dog's location through video transmission.

Vest: The main part of the system is located in the vest, with the sensors and GPS. It is essential that it can be quickly put on and must not reduce mobility

Helmet: Connected to the vest, has a camera, requires some adaptation but guarantees greater safety and stability of video transmission.

User Interface: Through the created interface, the user can observe the real-time location. They also have access to environmental data, such as temperature and humidity The camera, which can be turned on or off depending on autonomy or necessity, allows real-time viewing from the dog's point of view.

CONCLUSION

Our project, through features such as real-time GPS and Camera monitoring, aims to be of great use to both security forces and the general public, with a strong focus on comfort, mobility and safety.

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