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INTRODUCTION

K9 officers and their handlers require a strong bond and clear communication, however, this communication faces obstacles with noisy locations, long distances, and crowded spaces. Accurate information in a timely manner could save lives, whether this information is about the location of an explosive device or its chemical components. In addition, other officers assigned as backup often lack the experience to read the cues from the K9 and hinder their speed and effectiveness. We are hoping to address these challenges by facilitating communication between the K9s and the human personnel.

K9 VEST

Built upon a Ray Allen heavy duty K9 vest, our technology utilizes *WAGGIN*, a modular technology developed in our lab, to more quickly prototype and test different sensors in various configurations.

Based on our previous research, the sensors used in our vest are a capacitive sensor, a tug sensor, and an IR proximity sensor. These sensors facilitate communication from the K9 about suspicious scents and whether they are stable or unstable explosives.



K9 in a prototype *FIDO* K9 vest.

HANDLER INTERFACE

Optimized for smartphones, Google Glass, and mobile web, the *FIDO* K9 interface enhances the communication between handlers and their K9s, as well as between the handlers and other officers.

