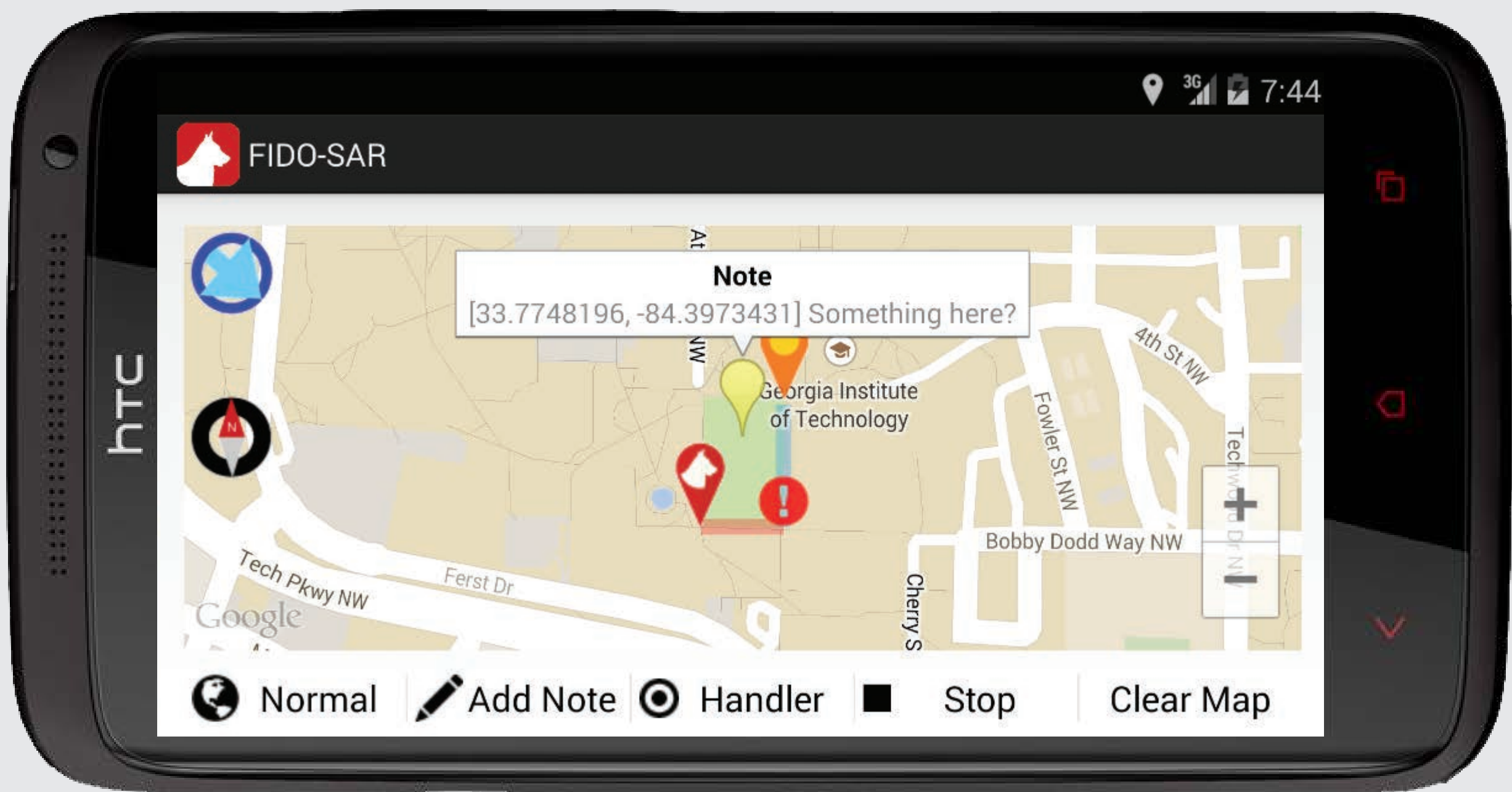
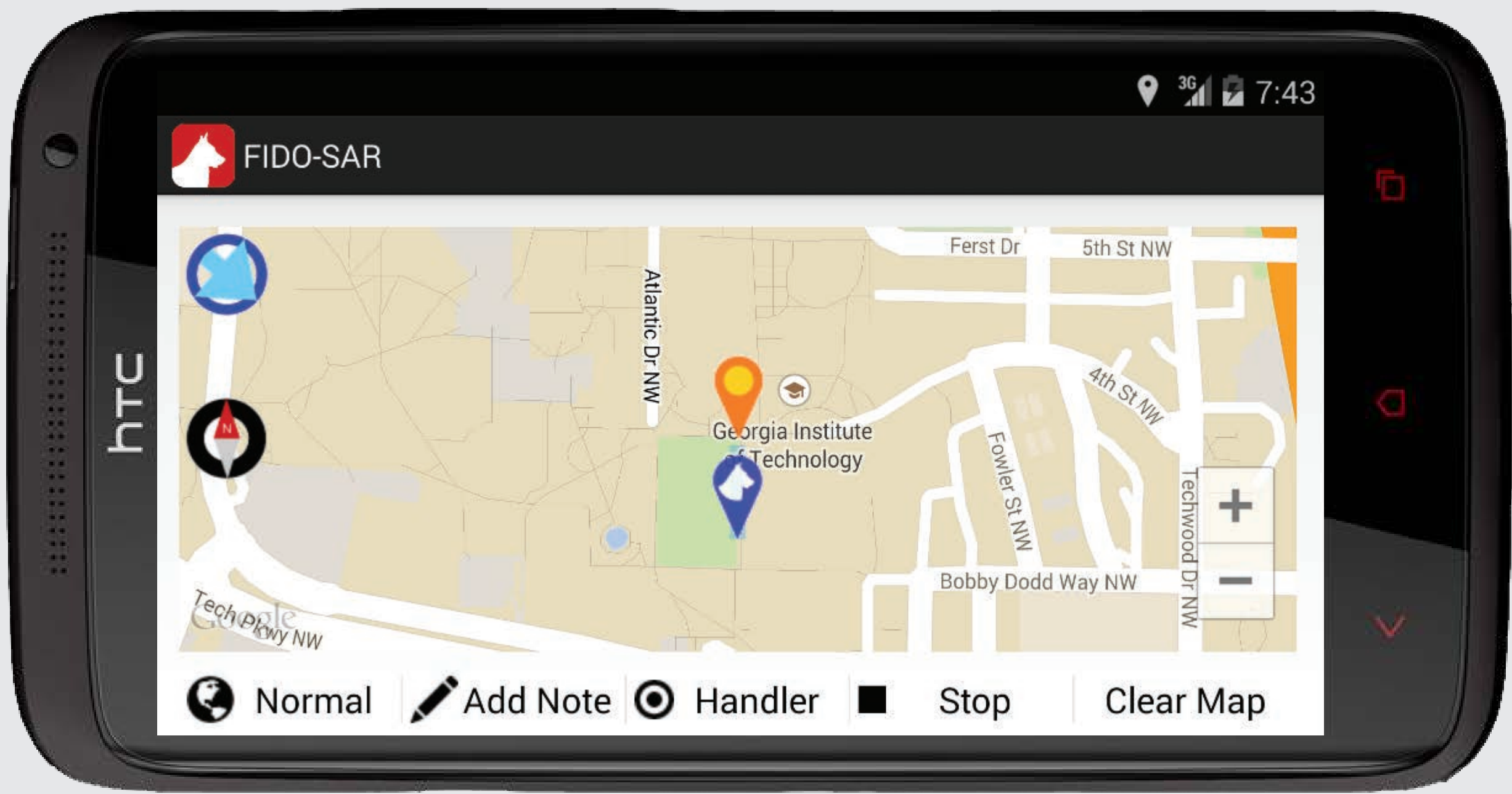


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SAR Dog-Handler Interface as seen on an Android HTC One



- Indicates your (handler's) location.
- Your dog's current location.
- Trail of where your dog has searched. This represents 5 meters in both (L&R) directions from your dog. The width changes as you zoom in and out.
- Your dog's current location after activating vest.
- Trail of where your dog has searched after activating vest. This represents 5 meters in both (L&R) directions from your dog. The width changes as you zoom in and out.
- Marks the location where your dog activated vest. Touching the icon displays the coordinates of this location.
- Displays the location of a note you wrote. Touching the icon displays the note's contents.
- Wind Indicator
- Compass

Motivation



The dog is encouraged to find the victim and then return to the handler.

Canine-aided search and rescue operations use dogs to assist humans in searching large areas of difficult to reach terrain. The benefit of this modality comes from the ability of dogs to move faster and more thoroughly than their human handlers. Unfortunately, air-scent dogs are still limited by the range of line-of-sight communication between them and their handlers. If the dog finds the target while being out of the handler's sight, he must temporarily abandon it and return to notify the handler. The repetition of this procedure until the handler has reached the target is known as recall-and-re-find.

Technology-aided SAR



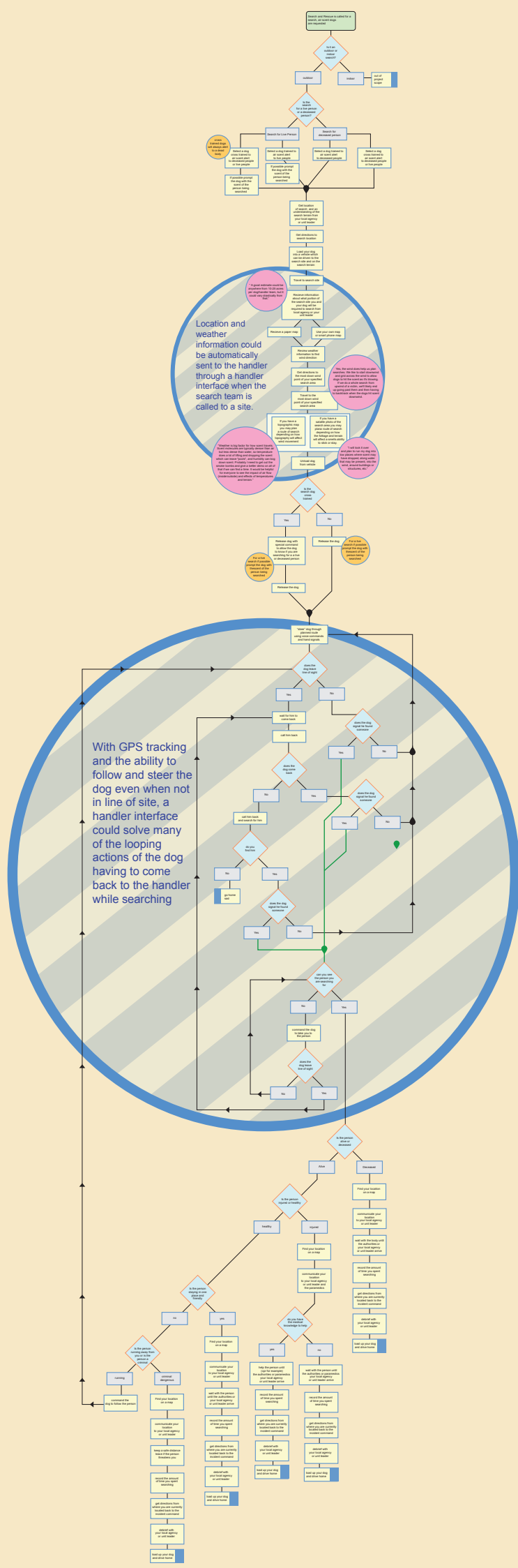
The dog is encouraged to find the victim and then return to the handler.

Allowed for dog/handler separation with a tracking interface application.

This application tracks both the explored paths and the areas alerted by the dog.

The application also incorporates necessary SAR information such as wind direction, orientation (compass) and map annotation.

Process



- Observed a practice SAR demonstration
- Conducted a preliminary interview of a SAR Dog-Handler
- Created a detailed task analysis flow chart
- Identified areas where technology could aid the SAR process
- Developed 5 concepts, and used low fidelity prototypes to narrow and refine ideas
- Remembering Nielson's Usability Criteria we further refined our idea
- Using the Android SDK and its Google maps API we developed a preliminary prototype
- We refined our now working prototype and implemented it on an HTC One to test the system and get feedback
- We intend to incorporate feedback and develop a testable prototype.