Name: Rob Townsend

Group: The Clairmont Crew

User Scenario: Spatial Awareness for Facilities Work Involving Ladders

Darryl is a maintenance worker who performs routine inspections for the HVAC systems in his assigned area. In addition to inspecting the main units on the rooftop and/or around the building, this includes checking the vents and ducts around the internals of the building, which can cover areas with large pedestrian traffic, as well as office spaces. In these cases, pedestrians don’t always pay attention to the safety of the workers, and can approach the ladder at distances that are unsafe for either the worker or the pedestrian.

During one such inspection, Darryl is working in the upper level of the Clough building, which contains both study spaces for students as well as biological and chemical instructional labs. Therefore, these areas can get quite crowded during class hours. A wearable audio device allows him to detect when any pedestrian approaches within four feet of the ladder while he is on it. In case someone does breach this distance, a warning sound plays alerting both Darryl and the pedestrian. If the pedestrian ignores the warning and continues approaching the ladder, the sound will increase in both frequency and loudness. Additionally, the sound will vary depending on the direction that the student approaches, so that the maintenance worker will know without even looking the general direction of the pedestrian’s approach. With the help of this device, Darryl is able to relax and focus on his work until notified of danger, allowing greater efficiency and safety in performing his duties.