Potential Users & Stakeholders

We are designing a tool to monitor, record, and analyze driving habits. The goal of our project is to prevent possible accidents due to distracted driving and to motivate drivers to take safety precautions on the road. Potential participants of this design include anyone who owns or operates a vehicle, provides insurance for drivers, or responds to motor accidents. Insurance companies or ride-sharing services (e.g. Uber) may be interested in tracking driving habits to conduct performance reviews. Experienced drivers, such as truck drivers, might use our design to improve their safety on long trips. Parents and their children may use our tool to solidify safe driving habits. Finally, other stakeholders for our design include law enforcement, courts, and first responders who arrive on the scene of motor accidents. These stakeholders may collect our tool's recorded data as evidence in a case.

Design Research Methods

We plan on conducting three types of research methods among our participants: interviews, contextual inquiry, and fly-on-the-wall research. For interviews, we will compose a list of questions, such as "*What are typical behaviors that you believe are distracting?*" For contextual inquiry, we will join participants in their car to observe their driving habits and ask follow-up questions only when stopped for safety reasons. For the fly-on-the-wall method, we will observe drivers without informing them that they are being watched. This will avoid the Hawthorne effect—a tendency for people to change their behavior when they know they are being watched. Our goal is to understand what type of behaviors are distracting, what triggers those behaviors, and what stops those behaviors.

Target Participants

First of all, we would like to start with experienced professionals—driving instructors. These participants have normally been driving for decades. During their tenure as driving instructors, they have familiarized themselves with many different driving styles and behaviors. We plan to contact the 911 Driving School, which one of our team members has a connection to. Since classes are taught by government officials (policemen and women), they will probably be willing to participate in our research. Ideally, we would want to do a contextual inquiry, sitting at the backseat during a lesson. However, for safety reasons, it might be difficult to find a participant willing to respond to questions while instructing a new driver. Conducting an interview with an instructor may be a more practical option.

Since our design targets regular drivers, one group that we can easily use as participants are parents and/or adults that we know. Adults are typically experienced drivers, but they also have certain habits, good and bad, which we can study. Another similar group includes our friends and peers. They have been driving for less time than older adults have, so they are less experienced and their habits have not been as developed. These groups are casual drivers, but we can also consider professional drivers, such as Uber or bus drivers.

Driving is a profession for Uber and bus drivers and they have developed habits that they are confident in. We can study these groups by watching them while they drive and asking them questions when road conditions are safe; for example, when they are at a red light or when they are driving on a straight road with light traffic. The things we will observe include: potentially distracting behavior; appropriate behavior; or unexpected behavior. This can be done by watching body placement and eye movements.