Abstract:

My iPhone is paired with the Bluetooth in my wife's car. This is useful when I am driving her car, however has undesirable effects when I am not in her car because my phone automatically pairs with the Bluetooth every time her car is on near me.

Problem Space:

My car doesn't have a Bluetooth, however my wife's car does. So I often use her car and to make things easy, I have paired my phone to the Bluetooth in her car so that I can go hands-free when I am driving. If I am home talking to someone or listening to music on my phone and if my wife pulls her car in, then my phone automatically leaves the current mode and pairs with the Bluetooth in her car. This happens unexpectedly and only after wondering why I can't hear anything, it would occur to me that my phone has indeed paired with another device. I would then manually un-pair my phone to resume my current task of speaking, however by that time would have already gone through some embarrassment if the person on the other side was just talking and wondering what happened.

User Types:

The users can be anyone that use a smartphone and reside in any country where the smartphone and Bluetooth technology is prevalent. In addition, I would like to focus only on users between 18 – 70 years old. Both novice and expert users can benefit from a better interface. Moreover, I would further qualify a user as someone that has an automobile equipped with Bluetooth or plan on acquiring one in the next few weeks or months. Users can also be anyone that has multiple smartphone pairing devices.

Needfinding Plan 1:

Survey:

First I want to understand the user better, where a user is anyone with a smartphone between the ages of 18-70. Specifically, I would like to get the educational background of the users and their occupation. This would help me understand how tech savvy the users are. Also, an inventory of the common tech gadgets that the users use can further enhance my understanding. In addition, I want to know where the users are located to understand their geographic distribution. Next, I want to know how the users use their smartphone. Though smartphones have become an integral part of everyone's life these days, I want to quantify this by asking the number of hours they use their phone every day. This would help set the platform for my questions about their motivations for using a smartphone. For example, do they use their smartphone for business, personal or both? In addition, I would like to ask them about the different tasks they undertake with their phone. Specifically, the time they spend talking on the phone, listening to music, playing games and other activities would help. As a follow up question, I would ask what the users need to accomplish their tasks using their smartphone. Do they use a headset, earphones or any other accessory? As a user who experiences this issue, I can see that my survey questions can lead to a confirmation bias which I will try to avoid by involving as many people as possible and specifically looking for such biases in my survey questions. In asking questions about the time that the users spend on different activities using their phone, I can encounter recall bias and hope to avoid that by referring to a more recent time frame such as past day or week.

Interview:

My first step would be to better understand the user, where a user is anyone with a smartphone between the ages of 18-70. In addition, I would further qualify a user as someone that has an automobile equipped with Bluetooth or plan on acquiring one in the next few weeks or months. To begin, I would ask questions about the different technology gadgets that they own. Specifically, the time they spend on each device would help me understand if they are a novice or expert when it comes to technology. In addition, my questions would be about the different activities they perform using their phone along with the approximate time spent on each activity. Moreover, I would ask what accessories they need to accomplish their tasks. The tasks I am interested are either speaking or listening to music on the phone. This would pave the way to ask about their experiences with each task – what do they like about them and what are their frustrations. In either case, I'd like to go a little deeper to understand the reasons behind both positive and negative experiences. Furthermore, I would ask the users how they feel if the tasks are interrupted because their phone leaves the current mode and pairs with another device automatically. Would they be frustrated, annoyed or embarrassed if that happens? This would help me understand their desirability for any changes in the interface. A common bias that I might encounter in my interviews is social desirability bias as the interviewees might want to say answers just to be nice. In addition, the way I respond to their answers might lead them to tailor their answers to suit my response. I will carefully ensure that my behavior in no way leads them to form any kind of judgment.

Think-aloud or post-event protocols:

As in my other approaches, the first step is to understand the user better. A user is anyone with a smartphone between the ages of 18-70. In addition, I would further qualify a user as someone that has an automobile equipped with Bluetooth or plan on acquiring one in the next few weeks or months. In particular, I am interested in understanding the background of users – level of expertise in the tech gadgets they own, tasks they accomplish with their phone and the accessories they need for those tasks. The tasks that I am interested in are speaking or listening to music on the phone. First, I would create different contexts for each task. For example, one scenario is where a participant is busy talking to their manager on the phone when it accidentally pairs to another Bluetooth device interrupting the conversation. Now, the participants are encouraged to think-aloud about their actions and feelings at that time. How would they respond? What are the key triggers for their feelings? In addition, the participants are asked to brainstorm different alternatives that can help change the way they feel. Specifically, would a buzz or a beep before the phone pairs up to another device suffice or an option in the interface that would restrict the pairing of the phone to another device while it is currently being used, is required. Another, scenario could be when they are having a phone interview for a potential job. Similarly, what would happen if it occurred while they are listening to music? Would their reaction be different, if so why? By following the post-event protocol, I can make sure that thinking about the task deeply doesn't affect the way they perform that task. Another bias that can be avoided in this mythology is recall bias, because the participants experience the event first and think aloud right after that, ensuring that the activity is fresh in their minds.