

Step 1 - Current Process

Notes

- This covers the process needed to set up an appointment with the Virginia DMV
- Each user journey taken online (laptop and smartphone) resulted in the user having to contact the DMV in person or by phone.
- The user journeys for the laptop and smartphone were almost identical.
- I used the Firefox browser for both the laptop and mobile phone user journeys, which may or may not affect my experience on the Virginia DMV website.

User Journeys

Laptop

- **Step 1:** Use a search engine to find the DMV website
- **Step 2:** Examine search results and click the link for the DMV
- **Step 3:** Use the search function on the website to search for “appointments”
- **Step 4:** Examine search results and select page for creating CDL appointments
- **Step 5:** Scroll down the page until "Test Locations" section is reached
- **Step 6:** Read information in section to find out how to schedule an appointment
- **Step 7:** Call number for testing center in appropriate reason to set up appointment

Smartphone

- **Step 1:** Open browser application on phone
- **Step 2:** Open a new tab
- **Step 3:** Use a search engine to find the DMV website
- **Step 4:** Examine search results and click the link for the DMV
- **Step 5:** Use the search function on the website to search for “appointments”
- **Step 6:** Zoom into page to see search results
- **Step 7:** Examine search results and select page for creating CDL appointments
- **Step 8:** Scroll down the page until "Test Locations" section is reached
- **Step 9:** Read information in section to find out how to schedule an appointment
- **Step 10:** Call number for testing center in appropriate reason to set up appointment

Phone Call

- **Step 1:** Dial number
- **Step 2:** Provide operator with desired testing location
- **Step 3:** Operator will provide caller with next available test time at desired location
- **Step 4:** If the caller cannot make the given time, the operator will provide the caller with other times at the desired location, as well as any similar times from other locations
- **Step 5:** Once time is agreed upon, caller will provide operator with phone number, driver's license number, and information about the vehicle they plan to test

- **Step 6:** Operator tells caller about the \$50 “No Show Fee”, if driver fails to appear or is late for scheduled test
- **Step 7:** End call

Analysis

Pain Points

- **Finding DMV website via a search engine** - there are many sites that provide general information about DMV’s across the country, like “dmv.com”, “dmv.org”, and “stateregistration.org”. These sites often appear at the top of search results, even when more specific search terms are used. These sites don’t usually have any official information outside of addresses and phone numbers. This can be confusing for users, since the domain names look similar to an official site.
- **DMV website search results** - the way search results appear on the website don’t make it clear to the user which one is appropriate for their problem. Relevant search terms aren’t highlighted in the results. While, the link needed for this exercise was the second one on the list, search terms with more common phrases might prove more difficult. This could partially be attributed to bad overall web design.
- **Parts of mobile site aren’t optimized for phones** - while the design of the Virginia DMV mobile site is bad, the search results page defaults to a desktop version, forcing the user to zoom in and scroll across the page to read its contents. This is annoying, inconvenient and, runs the risk of clicking on links unintentionally
- **No online resource for scheduling appointments** - speaking on the phone is a nice touch for many, but scheduling an appointment is a simple enough task that many don’t want to be bothered with having to speak with others. This process would be more efficient if there was an online form for this at the least.

Good Processes

- **Phone call with DMV operator** - this process was very straightforward for the user. The operator asks simple questions, collects easily accessible information from the user, and the appointment after which the appointment is officially scheduled

After Sign Up Process

The user receives a confirmation of their appointment time and location, preferably and email or automated phone call.

The user is given a window during which they can reschedule without facing a fine.

Problem Groups

- **Elderly** - this group is less likely to be technically literate at a base level, increasing the difficulty of navigating this process
- **Disabled** - disability could complicate this process in a number of ways, depending on the nature of the disability (sight, muscle movement, cognitive ability, etc.)
- **Technically illiterate** - lack of knowledge of proper search terms or navigating an unfamiliar website could hinder those who don’t have much experience using the Internet

Step 2 - New Process

Considerations

This conversation bot should live on the Google Assistant, since most users will most likely be using their phones to look up the information needed to make an appointment anyway. In addition, the Google Assistant has the new Duplex feature, which has the ability to make reservations at restaurants and is intended to add more functions as its developed.

In order to make this appointment, the DMV will need the following information from the user:

- Desired date, time, and location of the test
- Driver's license number
- License plate number, type, and class of vehicle being tested in
- Name, address, birthday (to confirm identity)

The conversation should start with a phrase spoken by the user, something similar to: "Hey Google, schedule me a motorcycle test appointment at the DMV."

Appointment Bot Script

Happy Path

User: Hey Google, schedule me a motorcycle test appointment at the DMV.

Bot: Okay, would you like to take the test at *[location one]*, *[location two]*, or *[location three]*?

User: *[Location two]*

Bot: Okay, the next available time at *[location two]* is *[time one]*. I see you have no conflicts scheduled; would you like your appointment to be at *[time one]*?

User: Actually, I have plans at that time. Is anything available around *[time two]*?

Bot: Yes, but it's in *[town name]* that is X minutes away from *[location two]*. Is that okay?

User: Yes.

Bot: Great, I've got your appointment time and location! Now I need to confirm your identity - do you have your driver's license and vehicle registration on hand?

User: Yes.

Bot: Good! What's the name printed on your driver's license?

User: **gives name**

Bot: What's the address?

User: **gives address**

Bot: I know your birthday is XX/XX/XXXX, so I'll just fill that in for you. Finally, can you read me your driver's license number?

User: **gives license number**

Bot: Great, thank you so much! We're all done using your driver's license. I'll ask you two more questions and then we'll be done! What's your license plate number?

User: **gives license plate number**

Bot: Thank you! And lastly, what is the type and class of the vehicle you plan to test in?

User: *gives vehicle type and class*

Bot: Awesome! I'm going to read the information you just gave me back to you, please let me know if anything is incorrect and I'll fix it for you.

Bot: Your appointment is scheduled for [time two] at [location two]. You will take your test in a [class] motorcycle. This license plate number of that motorcycle is [license plate number]. On your driver's license, your name is printed as [name], your address is [address], your birthday is [birthday], and your driver's license number is [driver's license number]. Does this all sound correct to you?

User: Actually, my license plate number is [new number].

Bot: Okay, I've changed your licence plate number from [old number] to [new number]. Is everything else correct?

User: Yes.

Bot: Okay! You should receive an email from the DMV shortly confirming the details of your appointment.

User Doesn't Have Driver's License

User: Hey Google, schedule me a motorcycle test appointment at the DMV.

Bot: Okay, would you like to take the test at [location one], [location two], or [location three]?

User: [Location two]

Bot: Okay, the next available time at [location two] is [time one]. I see you have no conflicts scheduled; would you like your appointment to be at [time one]?

User: That's fine.

Bot: Great, I've got your appointment time and location! Now I need to confirm your identity - do you have your driver's license and vehicle registration on hand?

User: No

Bot: Okay, I'll save all your information. When you have the documents, just say "I'm ready to finish the appointment" and we can finish.

User: Okay!

User: *retrieves driver's license and vehicle registration*

User: I'm ready to finish the appointment.

Bot: Okay! What's the name printed on your driver's license?

User: *gives name*

Bot: What's the address?

User: *gives address*

Bot: I know your birthday is XX/XX/XXXX, so I'll just fill that in for you. Finally, can you read me your driver's license number?

User: *gives license number*

Bot: Great, thank you so much! We're all done using your driver's license. I'll ask you two more questions and then we'll be done! What's your license plate number?

User: *gives license plate number*

Bot: Thank you! And lastly, what is the type and class of the vehicle you plan to test in?

User: *gives vehicle type and class*

Bot: Awesome! I'm going to read the information you just gave me back to you, please let me know if anything is incorrect and I'll fix it for you.

Bot: Your appointment is scheduled for [time two] at [location two]. You will take your test in a [class] motorcycle. This license plate number of that motorcycle is [license plate number]. On your driver's license, your name is printed as [name], your address is [address], your birthday is [birthday], and your driver's license number is [driver's license number]. Does this all sound correct to you?

User: Yes.

Bot: Okay! You should receive an email from the DMV shortly confirming the details of your appointment.

User Doesn't Know Vehicle Class and Type

User: Hey Google, schedule me a motorcycle test appointment at the DMV.

Bot: Okay, would you like to take the test at *[location one]*, *[location two]*, or *[location three]*?

User: *[Location two]*

Bot: Okay, the next available time at *[location two]* is *[time one]*. I see you have no conflicts scheduled; would you like your appointment to be at *[time one]*?

User: That's fine.

Bot: Great, I've got your appointment time and location! Now I need to confirm your identity - do you have your driver's license and vehicle registration on hand?

User: No

Bot: Okay, I'll save all your information. When you have the documents, just say "I'm ready to finish the appointment" and we can finish.

User: Okay!

User: *retrieves driver's license and vehicle registration*

User: I'm ready to finish the appointment.

Bot: Okay! What's the name printed on your driver's license?

User: *gives name*

Bot: What's the address?

User: *gives address*

Bot: I know your birthday is XX/XX/XXXX, so I'll just fill that in for you. Finally, can you read me your driver's license number?

User: *gives license number*

Bot: Great, thank you so much! We're all done using your driver's license. I'll ask you two more questions and then we'll be done! What's your license plate number?

User: *gives license plate number*

Bot: Thank you! And lastly, what is the type and class of the vehicle you plan to test in?

User: I'm not sure.

Bot: Check your vehicle registration, it should be written on there at the top of the page.

User: I'm looking, but I still don't see it.

Bot: Okay, what's the year, make, and model of your motorcycle?

User: *gives year, make, and model*

Bot: According to the state of Virginia, that motorcycle would be classified as *[type]* and *[class]*. I'll fill that in for you.

Bot: I'm going to read everything back to you, please let me know if anything is incorrect and I'll fix it.

Bot: Your appointment is scheduled for *[time two]* at *[location two]*. You will take your test in a *[class]* motorcycle. This license plate number of that motorcycle is *[license plate number]*. On your driver's license, your name is printed as *[name]*, your address is *[address]*, your birthday is *[birthday]*, and your driver's license number is *[driver's license number]*. Does this all sound correct to you?

User: Yes.

Bot: Okay! You should receive an email from the DMV shortly confirming the details of your appointment.

CONVERSATION DESIGN EXERCISE FLOWCHART