Friday 6/6 - User Test with General Manager of Air Traffic Management and Former OCC Digital Technology Manager at Delta Air Lines

- User 1: General Manager, Air Traffic Management, Delta Air Lines
- User 2: Former OCC Digital Technology Manager at Delta Air Lines

Script and Instructions: This is a usability test for aMaize, a graphical user interface of the FAA's Flow Management Data and Services (FMDS). aMaize unifies the 20+ TFMS applications into one interface, allowing FAA employees to work more cohesively and facilitating user onboarding. It is also designed to be more intuitive and highlight information relevant to the traffic manager.

The purpose of this study is to evaluate the design of aMaize from a user's perspective, ensuring user functionalities are comprehensive and efficiently organized. It is also to identify any issues with the interface, which can include difficulty in locating navigation buttons or navigating to a menu on the interface that is not related to a given task.

Throughout the study, I'd like to ask you to think aloud. I will be recording results in a document I've created. Do you have any questions before we get started?

Screener Questions (User 1)
- Have you used TFMS while employed by the FAA before, and if so how many years of experience do you have using these TFMS services/applications?
  - TSD (15 years)
  - FSM (19 years)
  - NTML (since its inception (10yrs viz into log))
  - Telcon (26 years)
- Age?
  - 55

Screener Questions (User 2)
- Have you used TFMS while employed by the FAA before, and if so how many years of experience do you have using these TFMS services/applications?
  - TSD (15 years)
  - FSM (22 years)
  - NTML (since its inception (10yrs viz into log))
  - Telcon (26 years)
- Age?
  - 60

<u>Tasks</u>

1. Using the Global Navigation Bar, how would you access the Map View?
    a. Time taken to complete task: **20 seconds**
    b. Usability issues identified:
        i.   Difficulty understanding how to navigate the interactive prototype

2. Evaluate the New York sector using the Constraint Summary.
    a. Time taken to complete task: **2.5 seconds**
    b. Usability issues identified:
        i.   N/A

3. Using the Layers dropdown menu, can you overlay the weather forecast, any rocket launches, and any military airspaces on the map? After doing so, please collapse the Layers dropdown menu.
    a. Time taken to complete task: **10 seconds**
    b. Usability issues identified:
        i.   N/A

4. You have the ability to draw a custom FEA line on the map using our Drawing Tool in the Global Navigation Bar. You currently have the map view selected, please access this tool.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i.   N/A

5. Select the button to continue on to the next step.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i.   N/A

6. Please draw an FEA line on the map.
    a. Time taken to complete task: **15 seconds**
    b. Usability issues identified:
        i.   Difficulty with interactive prototype as it forces you to draw a line in the preset location

7. Select the button to continue on to the next step.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:

i. N/A

8. Please name your FEA line, and input the parameters on the FEA you created.
   a. Time taken to complete task: **5 seconds**
   b. Usability issues identified:
      i. N/A

9. You have just inputted the parameters on the FEA you created, and now you would like to view its summary statistics. Show me how to access the FEA's data card.
   a. Time taken to complete task: **5 seconds**
   b. Usability issues identified:
      i. N/A

10. View the FSM Graph pertaining to the FEA line you just drew.
    a. Time taken to complete task: **15 seconds**
    b. Usability issues identified:
       i. Font size is too small due to us using split screen
       ii. Had difficulty locating button

11. Please remove the data card from the right monitor.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
       i. N/A

12. Search for the Jacksonville Constraint Summary.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
       i. N/A

13. Please overlay the weather forecast, any rocket launches, and any military airspaces onto the map? After doing so, please collapse the Layers dropdown menu.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
       i. N/A

14. Search for FEA 'FEAJX7'.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:

i. N/A

15. As you can see in the top right, we are currently in the Evaluating functionality. Please transition over to the Modeling functionality.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i. N/A

16. Search for FEA 'FEAJX7'.
    a. Time taken to complete task: **3 seconds**
    b. Usability issues identified:
        i. N/A

17. After creating your baseline proposal, you would like to change the rate. Please change the rate, then add this new proposed AFP.
    a. Time taken to complete task: **7 seconds**
    b. Usability issues identified:
        i. Font size is too small due to us using split screen

18. Select the button to add a TMI to the Revised Proposal.
    a. Time taken to complete task: **3 seconds**
    b. Usability issues identified:
        i. N/A

19. Select the button to share the data card to the Collaboration Feature, and send the data card.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i. N/A but stated it is similar to their iPhone

20. Type a message into the textbox in the Collaboration Feature.
    a. Time taken to complete task: **3 seconds**
    b. Usability issues identified:
        i. N/A

21. Send the Meeting Proposal in the Collaboration Feature.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:

22. Please access the Settings menu.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i.   N/A but recognized the 'gear' symbol is often associated with Settings

23. Navigate to the 'Map' Settings.
    a. Time taken to complete task: **2 seconds**
    b. Usability issues identified:
        i.   N/A

24. Navigate to the 'User Profile' Settings.
    a. Time taken to complete task: **2 seconds**
    b. Usability issues identified:
        i.   N/A

25. Please join the call in the Collaboration Feature.
    a. Time taken to complete task: **2 seconds**
    b. Usability issues identified:
        i.   Issue reading the font size (due to us using split screen) but still located the button

26. Please exit the call.
    a. Time taken to complete task: **2 seconds**
    b. Usability issues identified:
        i.   N/A but stated they like the icons as it resembles their iPhone

27. Implement the Revised Proposal.
    a. Time taken to complete task: **7 seconds**
    b. Usability issues identified:
        i.   Font size is too small (due to us using split screen) but recognized the correct button due to its color (green)

28. Insert rationale for the implementation of the proposal, and implement the proposal.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i.   N/A

29. View the NTML log.
    a. Time taken to complete task: **10 seconds**
    b. Usability issues identified:
        i. Font size is too small due to us using split screen

30. View more information regarding 'FCAJX7'.
    a. Time taken to complete task: **5 seconds**
    b. Usability issues identified:
        i. Font size is too small due to us using split screen

31. Search for a specific log in NTML.
    a. Time taken to complete task: **2 seconds**
    b. Usability issues identified:
        i. N/A

32. Search by sector in the NTML log, then minimize the log.
    a. Time taken to complete task: **6 seconds**
    b. Usability issues identified:
        i. N/A

33. Access multiple FSM graphs at once using the Left Monitor.
    a. Time taken to complete task: **15 seconds**
    b. Usability issues identified:
        i. N/A

34. Select the FSM graphs you wish to view, then select the button to make them appear on the Right Monitor.
    a. Time taken to complete task: **8 seconds**
    b. Usability issues identified:
        i. N/A

35. Please access the legend to see what colors represent, then close the legend.
    a. Time taken to complete task: **7 seconds**
    b. Usability issues identified:
        i. Icon is too small due to us using split screen

36. Please switch to the Theater Mode to access a different view of the FSM graphs.

     a. Time taken to complete task: **10 seconds**

     b. Usability issues identified:

         i. Font size is too small due to us using split screen

37. On the FSM graph you have selected, please make this graph fullscreen, then return the screen to its original size.

     a. Time taken to complete task: **7 seconds**

     b. Usability issues identified:

         i. N/A but recognized functionality based on familiar symbol

38. Please view the data links on the Left Monitor.

     a. Time taken to complete task: **5 seconds**

     b. Usability issues identified:

         i. N/A but recognized functionality due to the familiar symbol

Notes

- User 1: "You guys used standard icons that are very common to other tools…seems fairly intuitive"
- User 2: "Working between the two of those [the Left and Right monitor] makes sense…the way you are interacting between the two"
- User 2: "Kind of reminds us of FPS and ASD…the way Flight Planning System works with a graphical map"
- User 2: "We're very visual with how we approach the NAS"
- User 2: "I don't think it would take us too long…to figure out how this [aMaize] works"
- Had some difficulty reading certain aspects due to the nature of the user test (had to use split screen on one Desktop to showcase the Left and Right monitors side-by-side)
  - When using fullscreen to view a singular monitor, Users 1 and 2 had no difficulty with readability
- Recognized the meaning of the number next to the NTML log as unread messages since last viewing the log
  - Familiar to this concept from other applications User 2 has interacted with
  - Stated that there should be a function to confirm that a message has been viewed
    - User 2: "We get distracted very easily…hesitate from automatically reading the messages"
    - Grant the user the ability to dismiss a singular message or all messages
- NTML Logs + Search Bar

- ○ User 2: "You're protecting your nomenclature by building standardized subject lines"
- FSM Graphs
  - ○ User 1: "Viewing 8-12 hours simultaneously in one graph, not just 4. Allow that to scale to see more hours"