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CAR ENTERTAINMENT SYSTEM

Human-Computer Interaction

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Engenharia de Computadores e Informática

OVERVIEW

- System and Intended Usage
- Evaluation Methods Used
- Heuristic Evaluation (HE)
- Cognitive Walkthrough (CW)
- Problem Summary Table
- Overall Evaluation (Usability & UX)

SYSTEM AND INTENDED USAGE

- The car entertainment system is an integrated set of technologies and functionalities designed to enhance the occupants experience within a vehicle.

- It comprises a variety of multimedia features, connectivity options, and controls aimed at providing entertainment, information, and convenience during journeys.
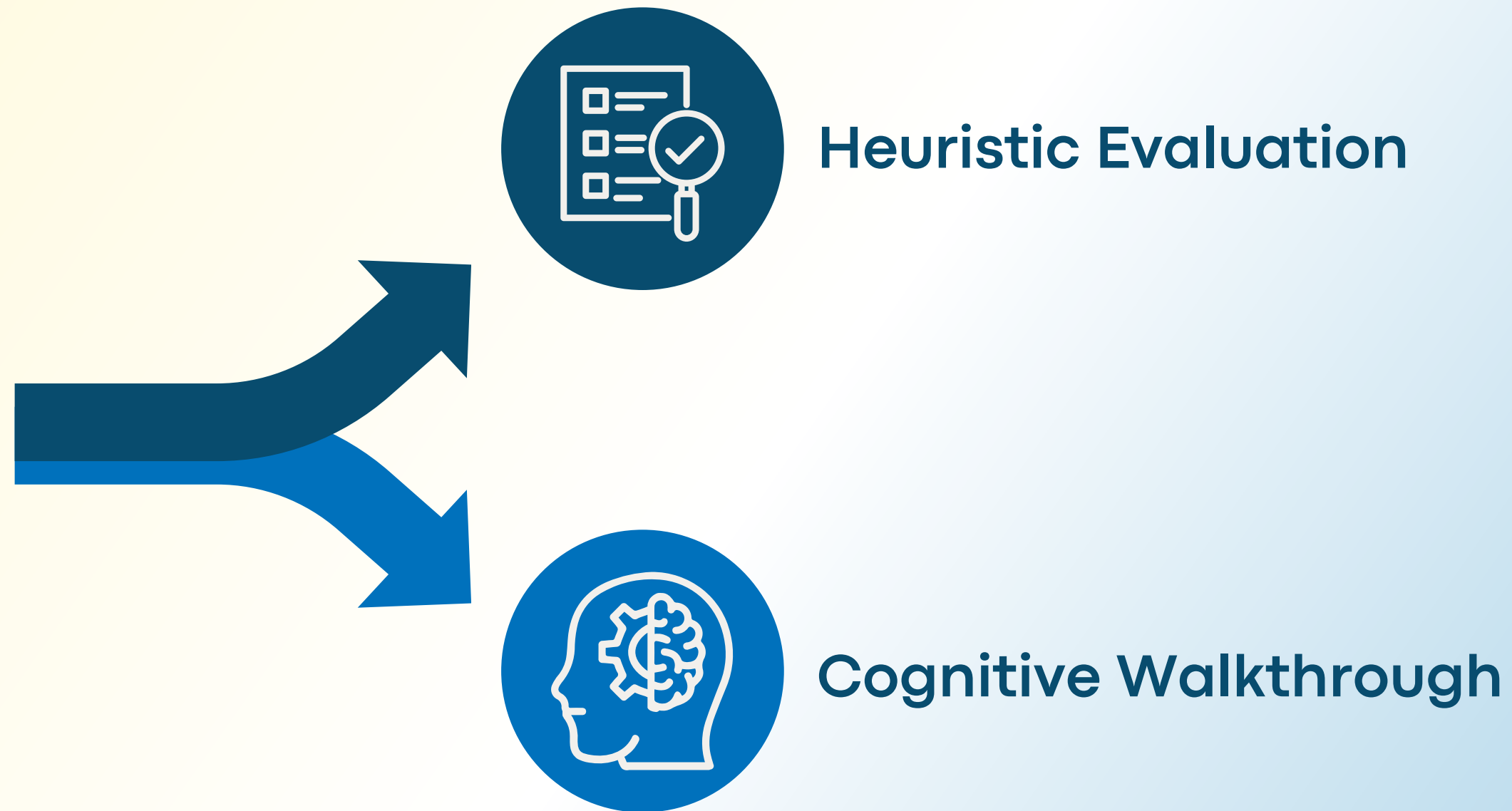
SYSTEM AND INTENDED USAGE

- Drivers: The system is designed to be intuitive and easy to use, enabling drivers to control functionalities safely and without distractions.

- Passengers: Passengers can enjoy entertainment during long trips, access destination information, and interact with the system to adjust settings according to their preferences.

HEURISTIC EVALUATION (HE)

- **Issue:** Energy Panel - Difficult Data Interpretation

- **Severity:** 2

- **Heuristic:** Visibility of the system status

- **Solution:** Modify data presentation format.

HEURISTIC EVALUATION (HE)

- **Issue:** Lack of Help and Documentation

- **Severity:** 3

- **Heuristic:** Help and documentation

- **Solution:** Add a button that, when highlighted/pressed, provides more detailed information about the data presented in the graph.

HEURISTIC EVALUATION (HE)

- **Issue:** Radio Stations Memory - Inability to Delete Added Stations

- **Severity:** 2/3

- **Heuristic:** User control and freedom

- **Solution:** Allow deletion of added radio stations from memory by implementing a trash bin symbol upon pressing a station in the memory list.

HEURISTIC EVALUATION (HE)

- **Issue:** Radio Stations Memory - Station Addition

- **Severity:** 2

- **Heuristic:** Error prevention

- **Solution:** Implement a system that prompts the user to confirm replacement when selecting a occupied memory slot.
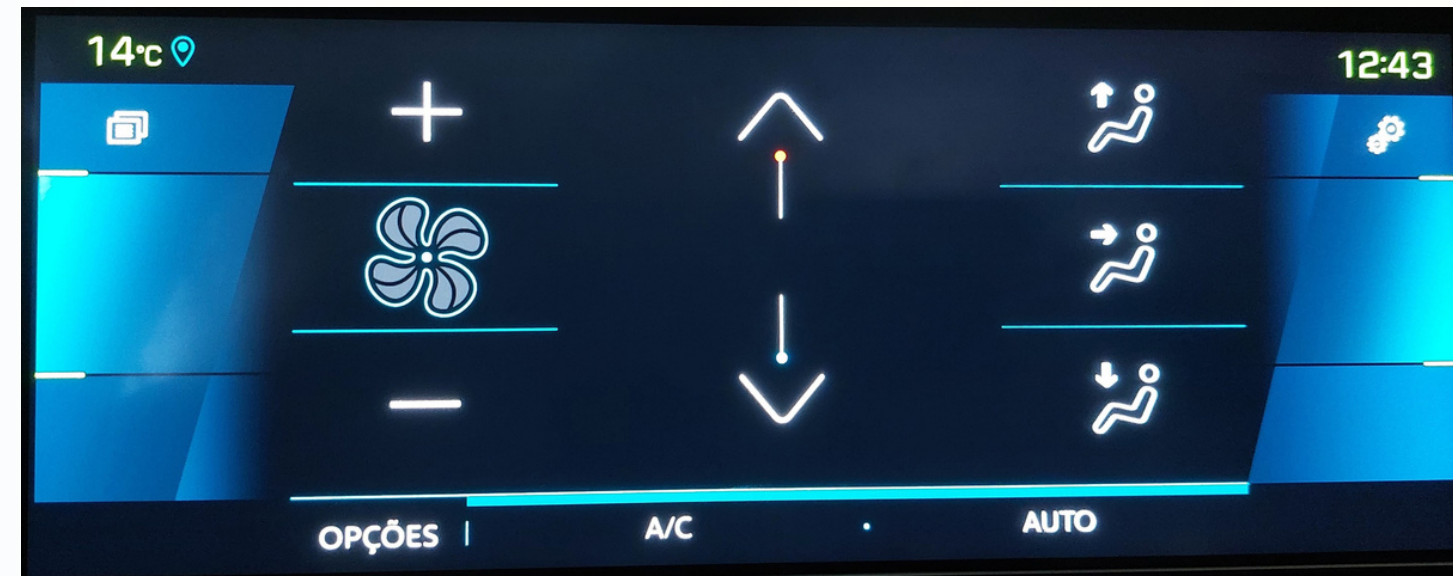
HEURISTIC EVALUATION (HE)

- **Issue:** Difficulty Memorizing Radio Station Addition to Memory

- **Severity:** 3

- **Heuristic:** Recognition rather than recall

- **Solution:** Add a star next to each radio station in the "List" option, aiding users in memorizing and storing stations in memory.

HEURISTIC EVALUATION (HE)

- **Good Practice:** Flexible System for All Users

- **Heuristic:** Flexibility and efficiency of use

- Minimalist system provides streamlined options for common tasks, benefiting both novice and experienced users. Accelerates interaction for experienced users without compromising usability for novices.

HEURISTIC EVALUATION (HE)

- **Good Practice/Heuristic:** Aesthetic and Minimalist Design

- The car's interactive system boasts a simple, minimalist design, presenting only essential functions and information. This approach ensures easy and swift user interaction.

COGNITIVE WALKTHROUGH (CW)

- Entertainment System UI:
  - Touch Screen
  - Physical Buttons

- Task: Adding radio stations to memory

- Users: Any driver or passenger

Steps:
   1. Press the physical music button.
   2. Select the "List" tab.
   3. Perform only one of the following options:
        a) Select the desired station.
        b) Press and hold the desired station.
   4. Perform only one of the following options:
        a) Press and hold a memory slot
        b) Select the "Memorize" option.
   5. If option b) is chosen:
        - Select a memory slot.

COGNITIVE WALKTHROUGH (CW)

- Will the user know what to do at this step?

  - No, the user may not know what action to take, especially regarding the final step of adding radio stations to memory.

- If the user does the right thing, will they know that they did the right thing, and are making progress towards their goal?

  - No, even if the user performs the correct action, they may not realize that they've taken the right step towards adding radio stations to memory.

PROBLEM SUMMARY TABLE

- #1: Energy Panel - Difficult Data Interpretation

- #2: Lack of Help and Documentation

- #3: Radio Stations Memory - Inability to Delete Added Stations

- #4: Radio Stations Memory - Station Addition

- #5: Difficulty Memorizing Radio Station Addition to Memory

#5	#4	#3	#2	#1	Issues / Subjects
	X	X		X	Subject 1
X	X		X	X	Subject 2
	X	X		X	Subject 3
X	X		X	X	Subject 4

OVERALL EVALUATION (USABILITY & UX)

- Minimalist design enhances simplicity and efficiency.

- Usability issues include lack of clear guidance and feedback.

- Interface lacks intuitive cues for certain tasks.

- Improvement needed to enhance overall user experience and usability.

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