The Future of In-Car Entertainment

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Meet Jane

- Owns a car
- Lives in a large city
- Works Monday-Friday, 9-to-5
- Drives to work every day
- Has a commute greater than an hour

Jane's Problems

- Jane is tired on her commute, and has trouble staying alert while driving
- Cannot find suitable radio programming
- Traffic on her drive is often extremely heavy, and coming to a complete stop on the freeway is not unusual--Jane often becomes bored on her commute
- Jane often gets frustrated at the radio, as every new song or commercial reminds her how long she has been in the car
- Last week, Jane almost rear-ended another car on the freeway while changing the settings on her radio
Design Needs

Our overhaul of in car driver entertainment focuses on a voice recognition interface, where users can change songs, play games and ask for direction with their voice. The design would focus highly on tailoring to the user's preferences. Drivers will have the ability to address the computer in a manner they are most comfortable with and the interface will quickly improve and the learning algorithm collects data about the user. The future of in car entertainment is hand free and tailored to the car owner.

- Advanced voice recognition software (natural language processing)
- In car wifi
- Large built in hard drive
- Advanced machine learning algorithms
- A platform to manage content from computer or smart phone
- Input or wireless connection to upload content
- A display for system visibility
- Built in payment system for online purchases
- A profile system that allows users to take their information to other cars
- **Two Main opportunities:**
  - customization
    - machine learning algorithm
  - safety
    - voice interface

- **Music System**
  - Ability to find out current song being played on radio
  - Ability to give system feedback about each song
  - Ability to discover related music
  - Ability to play music based on an emotion or mood
  - Ability to make playlists and add to them on-the-fly
  - Ability to get friends' playlists on your system
  - Ability to listen to other users who are broadcasting music

- **Audiobook System**
  - Ability to start, stop, pause, audiobook on-the-fly
  - Ability to look up definitions of words or information about places or events that appear in the book
  - Ability to recommend & send books to friends

- **Mental Stimulation / Brain Training**
  - Take jeopardy-style quizzes (and others) by yourself or with drivers around you
  - High score tables by area
  - Ability to create quizzes and share them with friends

- **News / Local Knowledge**
  - Ability to ask about landmarks / buildings / cool places to go
  - Ability to find news on subjects you are interested in easily
  - Ability to find local events having to do with music, art, etc.

- **In store app for music/book/game purchases**
Jane is getting ready to go to work.

Good morning Jane! What would you like to listen to?

The in-car entertainment system helps to create a customizable experience and making a user feel more connected to their car. Jane will have the option of listening to music, audiobooks, or even play trivia with her entertainment system.
I'm a little tired. Play me something upbeat.

Great! I'll put on your upbeat playlist. Let me know if you really like or dislike any songs.

Our interface allows Jane not only to pick specific songs and artists but to tailor playlists to her current mood. The entertainment system will have the ability to collect feedback from Jane and determine which songs should be aligned with which mood. Whether Jane is feeling upbeat or sad she can tell the interface her mood and the car will match her emotions with songs. As Jane uses this feature more, the learning algorithm will be able to better determine the correct songs to play. The ability to ask your car to "surprise me" or "play me something I have never heard" would add significant entertainment value to a long drive.
With the ability to connect to the internet, the entertainment system will be able to use advanced natural language processing to comb the internet and then return an answer. This feature allows Jane the ability to find out information about a song or in an audiobook without having to wait until after her drive or fumble around with her smartphone.

This song is great! Who sings this?

Could you pause the book a moment and look up this word?

One moment. I will look that up for you.
Let's play some more brain training games!

You have been performing really well in memory exercises. Would you prefer to continue working on memory or try a puzzle?

A long drive in traffic is one of the least mentally stimulating things that Jane has to do in her daily routine. With her new entertainment interface Jane can stay mentally sharp by playing brain training games with her car. The interface will track her results and present her statistics on the computer/mobile app dimension of the interface. Functionality could be built such that Jane can know he brain ability scores compared to the drivers around her. This would be like a verbal lumosity.
I just had a great idea! Write this down.

When Jane is listening to her upbeat playlist she has a brilliant idea about how to rearrange her schedule but she can't write it down while driving. Luckily her entertainment system has the ability to take Jane's dictation and save her idea for later. The interface has access to her calendar too, so she will be able to listen to and move around her appointments in case she forgets what she has planned for the day.
That was a great book. Can you find me a book about the 1920's now?

I searched the marketplace and a lot of people enjoyed the Great Gatsby. Would you like to purchase it now or wait until you are at a computer?

Go ahead and buy it now. I want to start it before I get home.

Jane just finished her current audiobook and still has a fair amount of her drive remaining. The cost of a new audiobook seems pretty worthwhile over sitting in a long commute with no book to listen to. Luckily her in-car entertainment system has access to an online marketplace that has her payment information. The ability to buy new media finds a user stuck in a situation where their willingness to pay for entertainment is significantly increased.
This song should definitely not be on my chill playlist.

I am so sorry. I will put on a song you have rated as chill. If you still like the song is there a time you would rather listen to it?

Of course no voice interface could ever be perfect when addressing preferences. When Jane hears a song she doesn't like or is tired of a book she can tell her entertainment system. Not only will Jane be able to change to something she likes. The machine learning algorithms will have another piece of information about Jane and be able to better cater to her specific preferences. The longer a user owns a car the better the system will become. Users will have the ability to plug in their information into borrowed cars as well and continue to have and build their entertainment experience.