



Reimagine the Road.

## Introduction

WATTZ is a conceptual Augmented Reality Global Positioning System Head Up Display (ARGPSHUD) which projects your GPS against your windshield for easier navigation purposes and reduce overall distraction time. WATTZ is designed minimally so that only the essentials of GPS information is displayed in front of you to prevent further distraction from the road.



## Problem

In unfamiliar surroundings, driver's can struggle to navigate even while using current GPS technology. Confusion created by dividing attention between GPS in the road increases the overall time that a driver is distracted from the road.



## Goal

Help drivers navigate more efficiently and reduce amount of time it takes to make decisions based on information displayed on HUD, reducing overall distraction time by GPS.



## Proposed Solution

Design a minimalist HUD display, innovating on current ARGPSHUD designs that will more efficiently communicate necessary information needed to properly navigate.



## Research Methods

**Secondary Research** on existing ARGPSHUD models and simulation models

**Survey** conduction to understand types of drivers and opinions of current GPS applications

**User testing** HUD size, icon comprehension and layout understanding



## Problem Findings

Users all utilize current GPS technology in different ways

Current GPS technology usability has a very wide range of ineffectiveness due to both user error and computer error

ARGPSHUD technology is very new, yielding less overall research on its effectiveness, as well as less total real world HUD's to conduct research on

## Research Finding Highlights

Studies showed that AR-HUD increased the ability for drivers to properly wayfind in a real and simulated areas they were not familiar with.

Studies showed that the amount of time that users looked away from the road to view the ARGPSHUD was less than the average time eyes were taken off the road when using an external GPS device (phone or console screen).

100 users surveyed between the ages of 16-66 revealed that use of proximity navigation and visual ways of wayfinding were more common than traditional wayfinding (street signs, highway billboards).

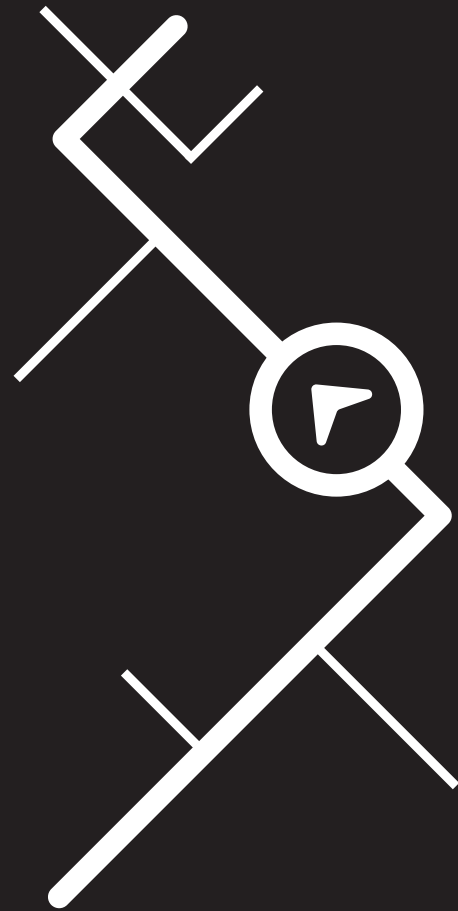
User's favorite GPS features were lane specification, the minimap, hazard indication and ETA.

## User Testing

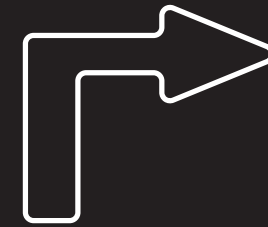
After designing different versions of the HUD, participants were asked which design appeared to be the most cohesive. Participants were also asked to describe what they thought the purpose of parts of the design were meant for and to test icon comprehension.

Participants sat in a vehicle with a mock up of the ARGPSHUD at different sizes to determine what size was the most readable.

Before



1.2 mi

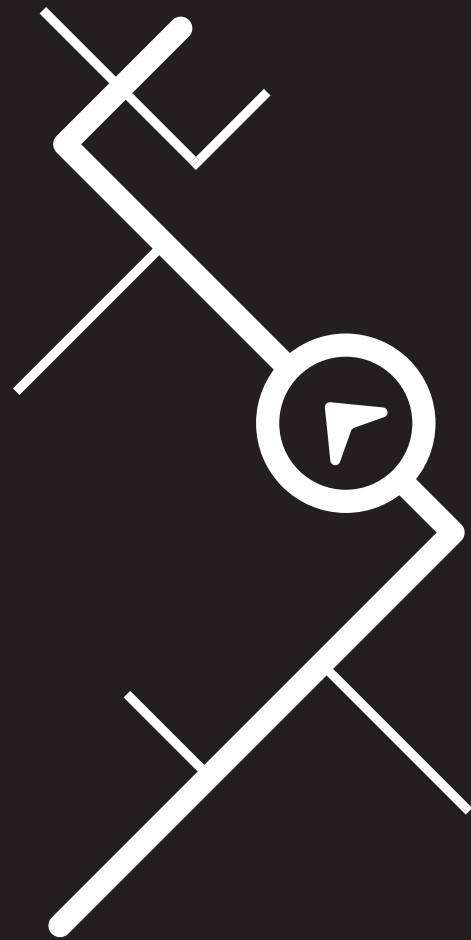


13 min.



# After

Added color contrast and increased sizing



Added readable directions

**1.2 mi**  
**Blue Ridge Parkway**

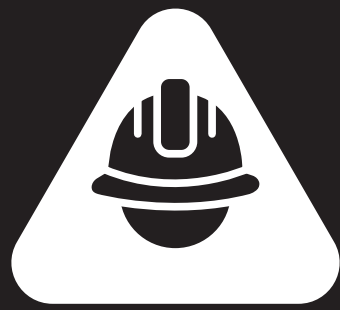
changed from stroke to opacity fill to increase readability



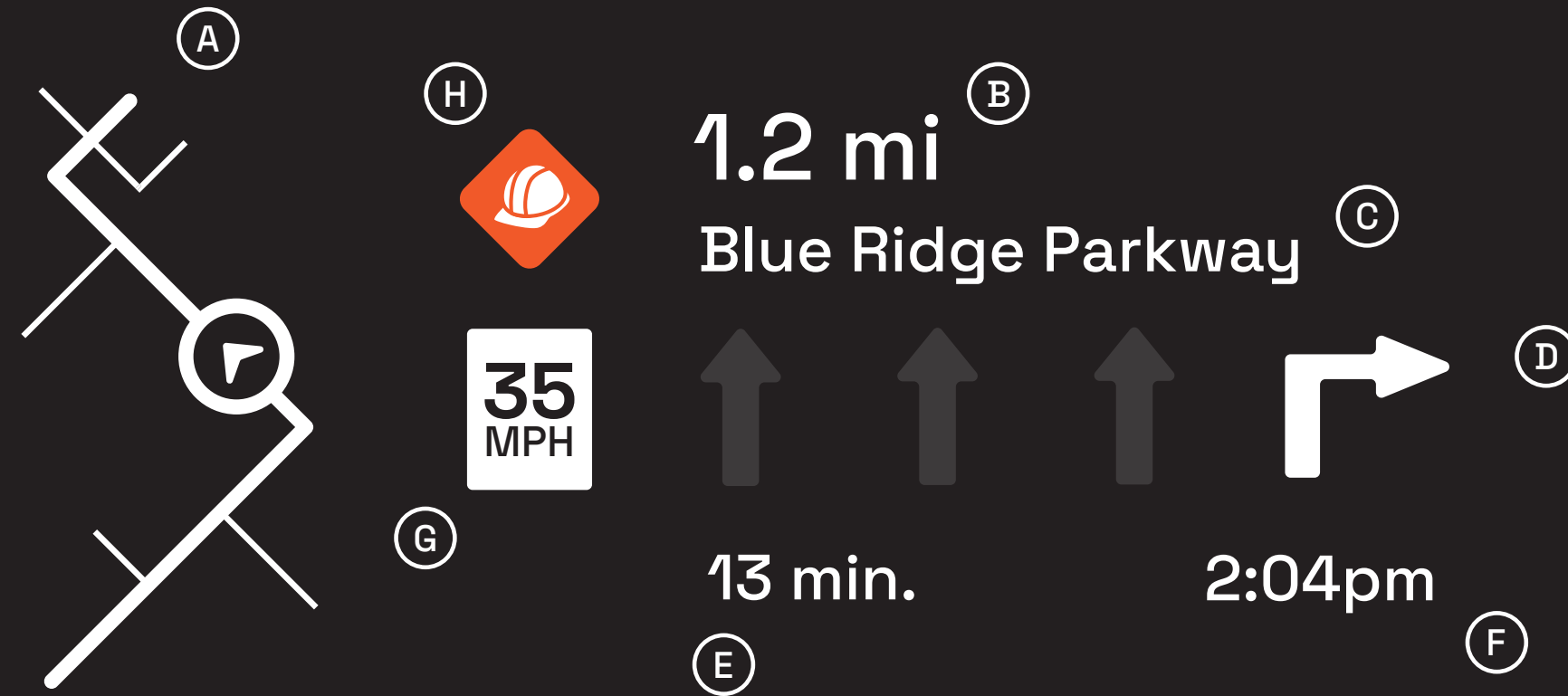
**13 min.**

**2:04pm**

Added time until destination with new space created



## Features



A. Mini map that displays your approximate location in relation to the road

B. Indication of how far you must go until you need to perform said action

C. The location of which you need to preform said action

D. Specification of the ideal lane or lanes that will optimize your ability to preform directions

E. The time until you arrive

F. Estimated time of arrival

G. The current speed limit

H. Hazard indicator



1.2 mi  
Blue Ridge Parkway

35  
MPH

13 min. 2:04pm

H  
C

D

F  
E



1.2 mi  
Blue Ridge Parkway  
35 MPH  
13 min.  
2:04pm



1.2 mi  
Bus Ridge Parkway  
13 min. 2:04pm

0 20 40 60 80 100 120 140 160 180 200

Check your ECU's temp  
Takt kontrol ediniz  
Kullan Mesajları 68 mi

17:41 BLUETOOTH  
Kaynak Bilinmeyen Parça  
Gözet Bilinmeyen Sanatçılar  
Parça İstasyonu Bilinmeyen Albümler  
Çiz Değiştir 1/1  
⏮ ⏪ ⏸ ⏩ ⏭



## Minimap



Vehicles current location



Normal



Slow



Standstill



Road closed

www.wattz.com

## Virtual Lane Assist

The virtual lane assist (VLA) feature is an optional feature with the WATTZ application. The VLA is a projection of your current path that overlays on top of the road using AR technology. This feature can be disabled or enabled by going into your dashboard settings.

With VLA



Without VLA



Quick User Interface Guide

www.wattz.com | WATTZ Copyright 2024

A large billboard for wattz.com is shown against a cloudy sky. The billboard features a large blue arrow graphic that curves from the right side towards the center. The text 'wattz' is written in a stylized, white, italicized font with a double underline, positioned above the arrow. Below the arrow, the slogan 'Reimagine the Road.' is written in a light blue, sans-serif font. At the bottom of the billboard, the website address 'www.wattz.com' is displayed in a white, sans-serif font. The billboard is supported by a metal structure with several spotlights mounted on top.

**wattz**

Reimagine the Road.

[www.wattz.com](http://www.wattz.com)









An aerial photograph of a dark-colored SUV driving on a dirt road that winds through a vast, open landscape of tall, dry grass. The sky is overcast with grey clouds. The text "Reimagine the Road." is overlaid in white, sans-serif font in the center of the image.

Reimagine the Road.