Driving Automotive Research in Android Auto

PROBLEM DEFINITION

Android Auto integrates the functionality of your phone into your car so that you can access apps and features while you drive. In order to create meaningful experiences inside the car, interactions have to be very carefully considered to help promote eyes on the road and minimize driver distraction. This is a challenging process and requires a lot of rethinking of conventional app design to fit the context of the driving environment. Research plays a key role in the design and development processes at Google in order to quickly evaluate concepts and provide feedback for improvement. To do this effectively, researchers at Google needed the proper equipment to allow them to run studies quickly and efficiently. They also needed to ensure that results are objective, reliable, and replicable.

WHY ERGONEERS?

For the project it was important to find a complete solution that provided a flexible research platform for conducting a wide variety studies and allowed a wide range of data measures to be collected including eye-tracking and driving performance metrics. We worked closely with Google from the beginning to understand their core needs and we used our extensive experience in the automotive field to define the best options available. The final solution covered all of their needs and exceeded conventional industry standards. We provided complete installation of the system with training and ongoing technical support to help their automotive researchers ramp up quickly and run studies.

SOLUTION

The delivered system is composed of a driving simulator with outside-world simulation, Dikablis Professional eye-tracking equipment, and the D-Lab data software with a number of different modules to help the team run studies from one platform. The research team collects eye-tracking, video, audio and TCP/IP data within D-Lab. Not only is the data recorded synchronously, but it also provides automatic glance calculations using Ergoneers' marker technology. The Android Auto research team now uses the system almost continuously to run studies to evaluate system features and explore foundational research topics. This provides a wealth of information to the greater automotive team and helps to continuously improve Android Auto.

I've been impressed with the level of service and detail that Ergoneers has provided my team both before and after the purchase. Delivery was on time and the installation was well-structured and organized," says Greg Neiswander, Senior UX Researcher at Google." And as we continue to extensively

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use our system, regardless of the issues we run into, we've always received fast and effective technical support. Ergoneers understands our tight timelines and because of our positive experience with them, we've recommended them to other colleagues at Google."

ABOUT ERGONEERS

Ergoneers GmbH was founded in 2005 as a spin-off from the faculty of Ergonomics at the Technical University of Munich. Today the company has a worldwide presence through three offices in Manching (Germany), Geretsried (Germany) and Portland (USA) and through global sales partners; serving the Transportation / Automotive, Market Research & Usability, Science and Sports / Biomechanics application areas.

In addition to development, manufacturing and distribution of measurement & analysis systems for behavioral research and optimization of human-machine-interaction, Ergoneers also offers comprehensive expertise in each phase of your study.

Our product portfolio primarily comprises of the 360-degree solution - D-Lab; an extensive software platform for capturing and analyzing human behavior. With its different software modules you can synchronously measure and analyze eye-tracking, data stream, video, audio, physiology and CAN-Bus data. With the Dikablis Eye-Tracking system, Ergoneers provides the best hardware for professional Eye-Tracking studies in real or virtual environments.

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