



Martijn Tideman

If Martijn Tideman gets his way, the user will become a designer and the designer a type of stage director.

In the new Virtual Reality lab, he gives motorists the opportunity to become acquainted with new technology.

They choose their favourites from a number of different scenarios.

Put the future user in the driver's seat

'Yet again, a car is involved. I guess I have a thing for them. When I graduated, I had built a Citroën model, which enabled you to compare the feeling of a large number of gearboxes. Although they were virtual gearboxes, operated using a haptic device bearing little resemblance to a gear stick, the test subjects indicated that it felt like the real thing. This could be concluded both from the objective measurement data and from the way they talked about it: "This feels like a sports car." "The gears are a bit sticky." My current research again involves putting people in the driver's seat, literally. Again, I have incorporated virtual reality, but now it is applied to give the future user the opportunity to directly influence the design of information systems that support motorists.'

'In terms of technology, there are a lot of possibilities to support motorists while driving. Drivers can be warned when a car enters their blind spot. There are adaptive cruise control systems designed to maintain a certain distance from the car in front of you, and there is even a lane departure warning system. If you start to drift from your lane, your seat begins to vibrate. There are all sorts of possibilities: driving instructions to save fuel, autonomous parking systems, etcetera. Many times, this type of technology is introduced as a distinctive gadget in new automobiles, particularly luxury cars.

But what do the drivers themselves actually want? I am trying to investigate whether we can give them a central place in the design process by putting them behind the wheel in a wide range of scenarios. These experiences lead to design choices taken by the users themselves. Our expectation is that, after going through a number of scenarios, they will simply be able to define the "ideal" system.'

'For this method, it is essential that all possible solutions are offered. After all, you do not want to nip creativity in the bud. For this reason, this "car" includes all manner of displays and other active elements. There are sounds or voices, touch screens and vibrating elements in the chair. You have to be able to offer the state-of-the-art, if not look a year or even five years into the future. We do not know how a test subject will interact with this, but it is incredibly exciting. One possible result is that younger drivers will be more inclined to be surrounded by technology than their older counterparts. Naturally, this research project involves collaboration with professor Bart van Arem's Applications of Integrated Driver Assistance (AIDA) knowledge centre, which specializes in these types of systems. In addition, we work with TNO, and professor Willem Verwey is providing psychological and ergonomic input.'

'Not only does this user-centred, scenario-based approach to the design process give the user a completely different role, it shifts the role of the designer as well. In many ways, the user becomes the designer and the designer a type of stage director. Do not underestimate the latter, by the way, the age-old role of designers will not become an ancillary function. They will have to create the virtual environment, conceive gaming scenarios for the user and, consequently, establish the degree of user freedom. What can users influence? What must they accept? As a result, the "creative" role of the designer shifts from product definition to the definition of the virtual environment. We also believe this process will accelerate as fewer design errors will arise due to misinterpretation of what the user wants. We are testing whether this process is viable in the new Virtual Reality lab, in which my virtual car will also be installed. This lab is filled with numerous interactive possibilities for gaming and brainstorming. Within the classical approach, brainstorming was typically an activity of specialists from several disciplines. What will happen when you involve users at a much earlier stage of the design process or give them an active role through gaming? I can't wait to see the results!'

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