



## **Inquiry of in-built car navigation systems and UX designs**

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In recent centuries, you had to use analogue methods (paper-based maps, oral guidance) to go from A to B. Nowadays if you lose yourself, you only have to ask your navigation system. It can be a mobile phone app, a PDA/PNA or built-in GPS Navigation System. What kind of “help” you choose depends on the mode of transport and on your wallet. Of course, for car navigation you expect a completely different UX (user experience), and different user interface and map. The driver will not watch the display for more than two or three seconds for safe driving, so it is very important to think carefully about the information the driver needs on the go and which can be passed on during this time.

Our purpose was to examine Hungarian user navigation habits and to assess user needs with the help of representative questionnaires. Here we got help from NNG LLC., which is a global company that develops the next generation of navigation and infotainment systems for the biggest automotive companies around the world. Their solutions are currently used in more than 30 car brands, and they have partnerships with 7 out of the top 10 car manufacturers around the world. NNG has been prepared a similar questionnaire 8 years ago with 109 participants and 153 questions. Knowing this study and with the help of personal consultations our questionnaire was created. This survey was made with “Google Forms” whereas this is the most well-known form of questionnaires.

It consisted 3 parts: general information, whether if someone use or do not use built-in GPS in their car. In the general part we asked for personal information (age, qualification, inhabitancy) and information about general driving habits (since when someone drive, use a car, what environment most often he/she drives etc.). If someone says he/she doesn't use a built-in GPS we asked only a few questions. We wanted to know why he/she didn't use it and what else he/she used instead. The longer part of the survey was about habits of using built-in GPS. We asked how much it used in certain situations or how is it used. Which functions are important for the driver, what buttons/information do they want, especially on the navigation/guidance view.

It can be said, that most of the cars used in Hungary are over 10 years old and more than 60% of drivers bought used cars. Based on these, it is not surprising that only around 15% have built-in GPS in their cars, and only about 60% of them use it. The number of those who did not request the GPS directly at the purchase was infinitesimal. According to the questionnaire, the ~ 10% of the total respondents who use built-in GPS, do it regularly and with great confidence, most of them are aware of the different functions. 2/3 of them updates the database relatively regularly.

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