

“USABILITY OF NOTIFICATIONS IN VOICE TRANSLATOR’S INTERFACE”

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Voice user interfaces using AI have opened new opportunities in overcoming the language barrier for travellers on the go in transport hubs such as airports, train and bus stations, ports. Travelling over various distances may involve crossing multiple time zones and then subsequent travel fatigue can therefore lead to decrease in concentration and alertness, mental and physical performance. As a consequence, tourists that have a layover may forget that they are in a different time zone, miscalculate the departure time and miss the boarding, despite using a voice translator as a helper.

The aim of this research is to improve a functionality of a voice translator mobile application by adding a notification function for current time check and prevent wrong traveller’s actions that can be caused by stress and fatigue.

Notifications in voice translator can appear after the system have recognized key phrases from the user, which fall into a variety of words related to clarifying information about flight and travel process (e.g. flight status, landing time, departure time, etc.). Once they have been recognized, a notification to check current time is displayed for a traveller (text, sound, graphic form or their combination are possible). Keywords should be selected taking into account user’s needs and context. In addition, the design of reminders should be created in a simple form, with brief information to avoid user’s confusion. From a design perspective, notifications can come in various forms, each serving a specific purpose: notification or warning message is displayed in the form of a pop-up window or banner in the middle of the screen for easy detection and data verification; tooltips provide brief explanations or assistance with minimal interference in the translation process; confirmation dialog before viewing translation results creates a pause, allowing users to double-check their actions; status or progress indicators can show that user needs to check the time again; usage of bright, contrasting colors to draw user’s attention to the need of time check; icons to remind user to check the time (e.g. exclamation mark); translation results may be unavailable or partially highlighted, indicating that

they will be activated only after the time check is completed. To obtain data on usability of notifications for users, it is necessary to create an interface prototype with different notification options in Figma and then conduct usability A/B testing. To confirm the strong influence of the notification form on user's satisfaction, Spearman's correlation coefficient can be calculated

As a result, it is possible to create notifications that allow foreign travellers to avoid errors in accurate understanding of current time value when translating information at airports and other transport hubs, that ensures successful completion of traveller's boarding task.

In conclusion, proposed approach will allow to configure the voice translator interface in a way that best suits the most users' preferences and prevents possible errors in understanding translated flight data, which is caused by travel fatigue.

References:

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