

Test note on the GATEBOX dated May 25, 2022

First experiences with the GATEBOX

Possible target groups

Target groups for the GATEBOX as a virtual companion can be, in my estimation, among others, elderly single people, people with a social phobia, bedridden people, people with limited mobility or with immobility. Furthermore, the GATEBOX can be very helpful in case of individual long-term illness. Furthermore, children should also be considered, e.g. seriously ill children on a cancer ward or children who have little social contact with their classmates and peers due to a long-term illness.

Intended use

The GATEBOX can serve e.g. for the entertainment of elderly people - combined with the simultaneous possibility of a realistic communication. The communication of information should only be in second place. The device can arouse emotions and inspire.

Function test - basic information

The GATEBOX does not react emotionally to non-interpretable commands from the user. Sometimes there is no reaction, even if the user understood the message (this can be seen in the text output). Sometimes there is also a hint with the request to explain the situation differently.

Test of the update from 18.05.2022

On 18.05.22 the GATEBOX initially 'crashed' when booting. At a restart a system update was obviously installed. This was recognizable by the fact that the device responds with the voice output 'Hi' when the activation button at the front of the GATEBOX is pressed.

- Addressing the device to new messages leads to the display of two US sports news, with only the first one being read aloud.
- When addressing 'Weather forecast', the display 'Weather forecast' appears and the voice output 'Did this help?'
- During voice input, the text is sometimes displayed incompletely, i.e. it is often already cut off after approx. 10-15 characters.
- Testing was often done with the phrase 'Wikipedia - what is..', which initiated a response in most cases, but many times was inaccurate or wrong.

Properties evaluation

Figure impression

- The waving of the figure looks childish and should be omitted or used only occasionally
- Other gestures should also be used to visually support the voice output
- The gestures of the hands could be used to support the speech output.
- The body proportions of the figure look irritating
- The fingers of the figure are too long
- The posture of the figure is not ideal (position of the hands, communication while standing); the figure associates shyness

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- Rising symbols in the background give the impression that the figure is under water.
- Why doesn't the figure sit comfortably in an armchair (as in a You Tube clip from Japan, for example)?
- An open-minded attitude would be more empathetic

Voice functions

- The voice input works with a very good recognition rate (practically error-free)
- The voice output is pleasant, the speech tempo is good, the speech melody is good
- The voice output should be in complete sentences - unless only one term was queried
- For unrecognized questions, the response is often 'did that help?' or 'was that what you were looking for?' or there is no response at all. This is unsatisfying for the user. There should be a response in any case.
- The elementary ability to dialogue is missing

Operation

- The operation by pressing a button is annoying. It would be better if you could address the device with the name of the animated character. Examples: 'Hey SIRI' (Apple) or 'Hello ID' (VW, start the voice input for the VW ID 3 car).
- The unit cannot be turned off with the switch located on the back; the system reboots when the switch is pressed.

Other

- The text display in the background is distracting; it should be possible to switch it off
- The query 'new news' returns US news from CNN, ABC, etc.

Device documentation and operating instructions

- An instruction manual is not available
- A help function is not implemented (test performed by addressing with 'Help')
- It would make sense to first explain or document at least the permitted or expected inputs, so that the user does not have to try out what works unnecessarily.

Assessment

For the target groups mentioned above, the GATEBOX is an enrichment; this explicitly applies to single people in need of care, for whom especially the employees of the outpatient care service are often the only contact persons. Therefore, the GATEBOX represents a great opportunity for them to become a familiar companion over time. Old people usually like to watch TV programs for entertainment. The device thus enters into competition with television. The additional benefit provided by the device must be clearly evident to the user. The current option of using the device primarily via Wikipedia is unlikely to generate sufficient initial interest on the part of the user.

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Recommendations for further development

The use of the device should be enjoyable and contribute individually to entertainment and communication. An important aspect that should not be neglected is the aspect of "humor" that the system can convey in an appropriate form.

The device should start a dialog with the user as soon as he is in sight of the GATEBOX. The address should take place in a relaxed form. The GATEBOX itself should act as an interaction partner, giving impulses of its own accord and radiating empathy and interest in a personal dialog. Without the direct address and the individual personal communication, the user could possibly lose interest in the GATEBOX quite quickly.

The device should develop an interest profile from the user's queries. At the beginning of use, it should therefore conduct a small and a comprehensive anamnesis with the user (e.g., what are his preferences and interests, what are his settings, etc.).

The animated character should have a concise name (see Japanese version; even with a homepage!), to which it reacts when addressed. We named our character 'Eleni'.

The test of the GATEBOX should not only be carried out by potential users; rather, if necessary, nursing staff and caregivers as well as relatives should also be included in the practical test with their expertise. The same applies to the machine learning process as part of the personalization of the GATEBOX.

The device should take into account the current time of day and include a calendar with holidays and personal appointments that are particularly important for the user (e.g. birthdays of relatives, etc.).

The test will continue as the system behind the GATEBOX is constantly being developed.



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