

BabelDr – An Innovative and Reliable Translation Tool

Problem

Context :
Europe is facing a migration crisis.

At the Geneva University Hospitals (HUG) :

- 52% of the patients are foreigners
- 12% don't speak French at all

In terms of medical care, especially in emergency situations, language barrier can generate problems in :

- Quality
- Security
- Equitability
- Cost

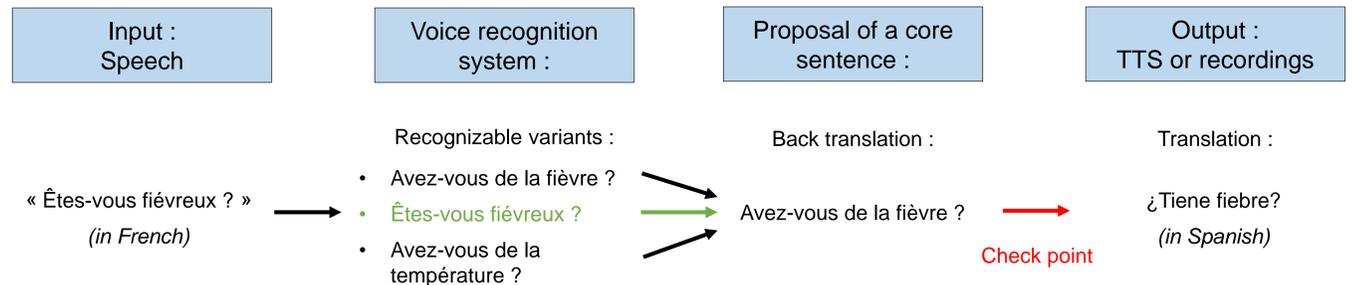
Innovative

Advantages and Functions :

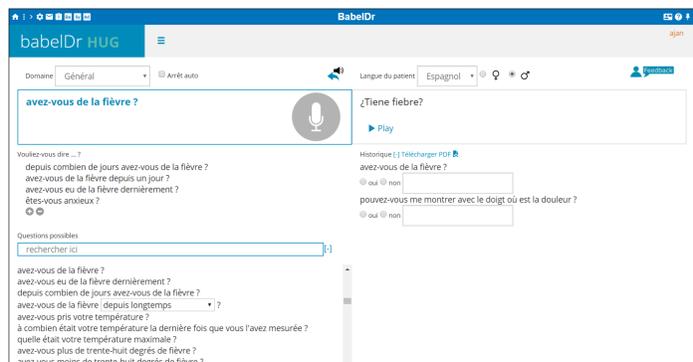
- Translation verified by experts at the Faculty of translation and interpreting, University of Geneva
- Back translation feature
- Not a word for word translation
- Guarantees data protection
- Translation according to patient gender
- Customizable to any situation or context

Solution

How it works



What it looks like



Available languages :

- Spanish
- Albanian
- Arabic
- Farsi
- Tigrinya
- Sign language (LSF-CH)

Expandable to other languages

Multiple platforms

Studies

Study 1. Can Speech-Enabled Phraselators Improve Healthcare Accessibility ? A Case Study Comparing BabelDr with MediBabble for Anamnesis in Emergency Settings
Boujon, V., Bouillon, P., Spechbach, H., Gerlach, J., & Strasly, I. (2018)

Population

- Medical Students (N = 10), French
- 2 Standardized Patients, Spanish

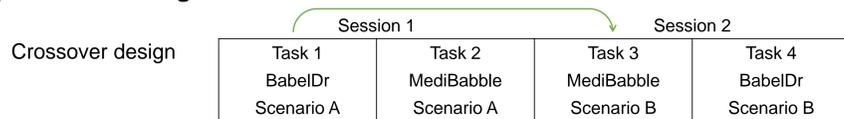
Tools

- Tablet (MediBabble system)
- Laptop (BabelDr system)
- 2 Questionnaires (1 per session)

Type of interaction

- BabelDr – navigation using voice recognition system
- MediBabble – navigation through a tree system logic

Experimental design



Results

	Number of correct interactions
BabelDr	198 / 200
MediBabble	195 / 200

Successful interactions
• Similar performances

	First use	Second use
BabelDr	20s	19s
MediBabble	30s	37s

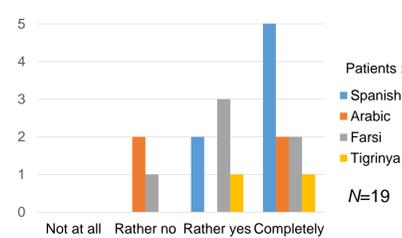
Difference in time by sessions
• Time of use is lower
• Average time in favor of BabelDr is 11 seconds (95%CI, 4.6-17.3, p<.001)

	First use	Second use
BabelDr	3.3	3.3
MediBabble	5.5	6.3

Difference in clicks by sessions
• Less mouse clicks
• Average clicks in favor of BabelDr is 2.7 (95%CI, 1.8-3.7, p<.001)

Study 2 (In Progress). Used at the HUG : Descriptive Analyses of Patient and Doctor Satisfaction in Emergency Settings
Spechbach, H., Bouillon, P., Gerlach, J., Vuadens-Lehmann, A. & Janakiram, A. (2019)

Results :

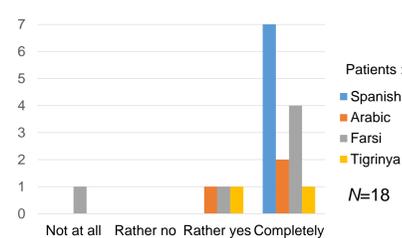


Patient

Communicate the reason of visit

Item 6 : "Have you been able to communicate to the doctor the reason for your visit to the emergency room ?"

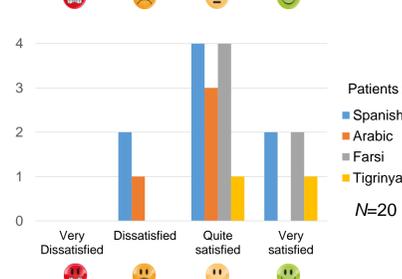
- More than 75% of patients are able to communicate their problem to the doctor



Satisfaction level

Item 11 : "How satisfied are you with this translation tool ?"

- More than 90% of patients are satisfied with the system



Doctor

Satisfaction level

Item 21 : "Regarding the use of this software, would you say that you are ..."

- More than 75% of doctors are satisfied with the system