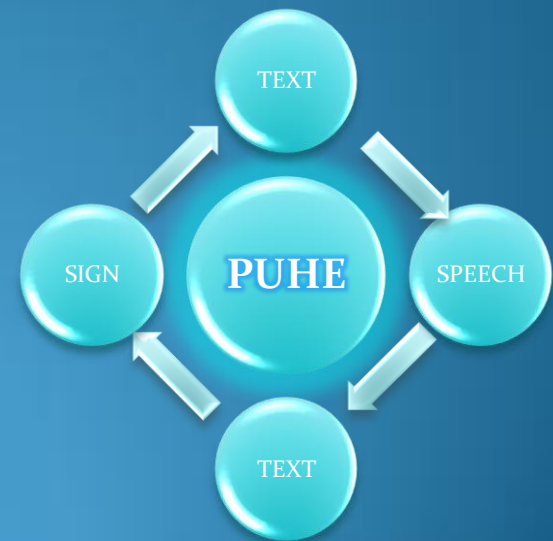


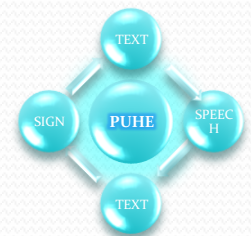
# MALT

Language Translator



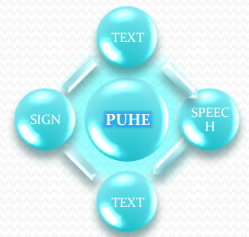
# Background

- There are approximately 5 000 people whose maternal language is Finnish sign language.
- In addition, about 9 000 people (hearing impaired, friends of deaf people, etc.) in Finland use Finnish sign language .
- There are over 36 million people in the world, who use sign language in their everyday lives.
- For every 1000 people there are 12 children that are deaf or mute.



# Problems

- Deaf and hard of hearing people often feel left out of conversation or they are actually ignored by other people.
- “Lip-reading is not easy!”
- Deaf people want to be treated the same as other people, with equal rights and respect.
- Interpretation is error prone after 15 minutes.

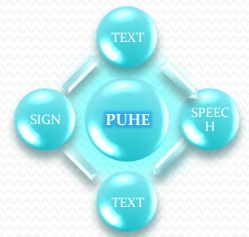


# Our Goal

- To aid hearing impaired people to use their first language.
- Solution: MALT Language Translator.
- MALT is powered by our own PUHE engine.



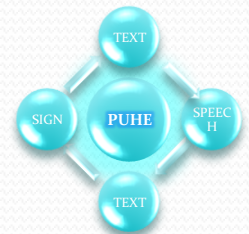
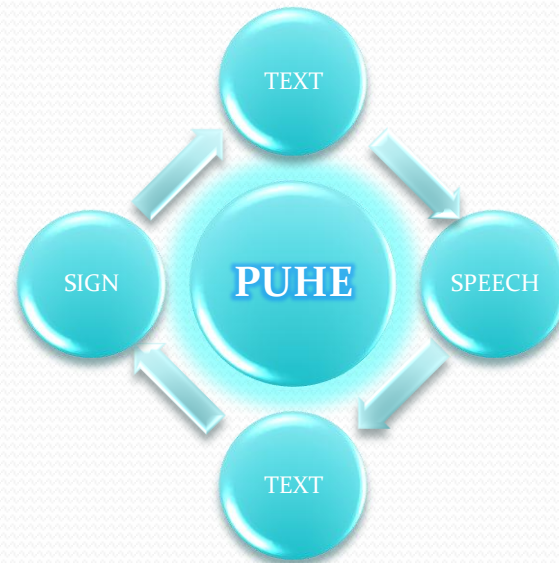
Develop a global partnership for development.



# PUHE Engine?

The PUHE engine is a tool to process natural languages. It handles translation from sign language to speech and vice versa. PUHE is divided to 2 logical packages.

- SPEECH to SIGN
- SIGN to SPEECH



# Functionalities

## Translations (PUHE)

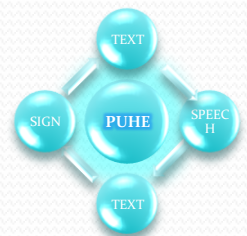
- Speech to sign language
- Sign language to speech

## Social dictionary (PUHEpedia)

- Users can add new words (signs) via webcam in different sign languages

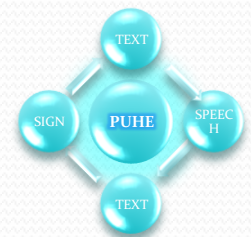
## Education (PUHE@edu)

- Learning

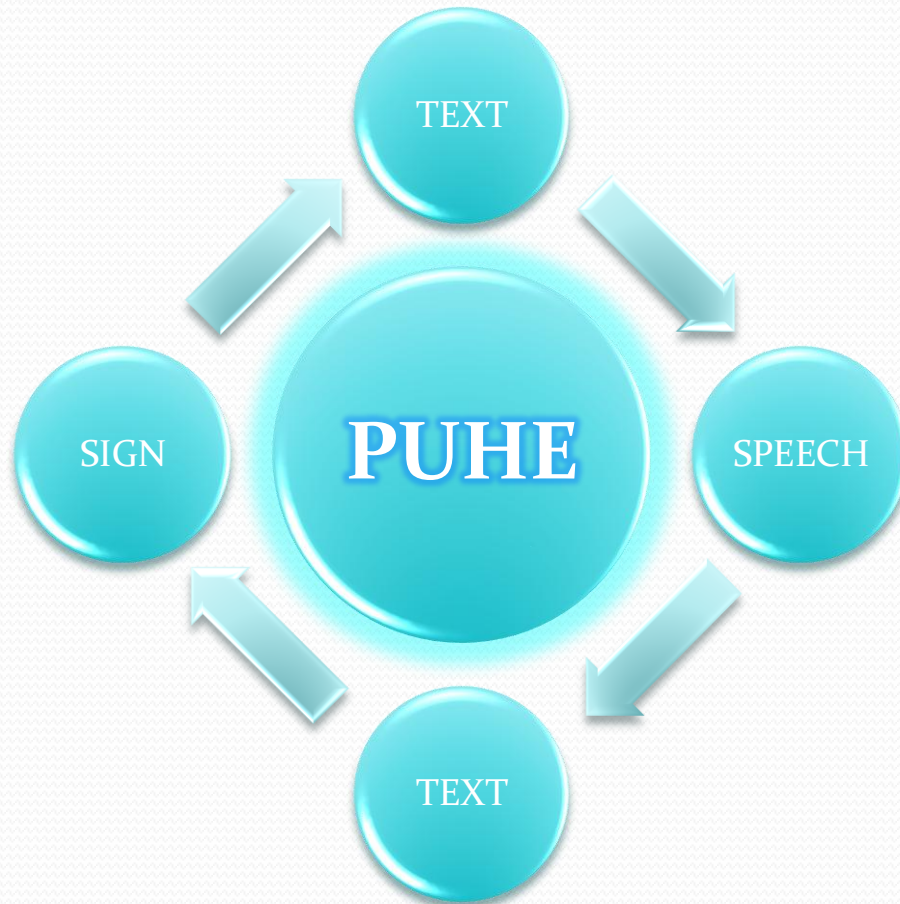


# Technologies

- MS SQL Server 2008 SP1
- Visual Studio 2010 Beta 2
- Silverlight 4 Beta
- MS Speech SDK 5.1
- MS .NET RIA Services
- .NET Framework 4 Beta
- Expression Blend Preview for .NET 4



# Demo





# Future goals

- Implement motion recognition
- Create social dictionary
- Add Finnish sign language
- Microsoft Azure
- Enhance User Experience

