ABBI Project Newsletter

January 2015

Research and Development

by The ABBI team

In the last six months the ABBI consortium have worked on multiple expermental and technological aspects:

- ABBI2 prototype has been developed
- A spatial rehabilitation program has been performed
- Audio user evaluation have been performed

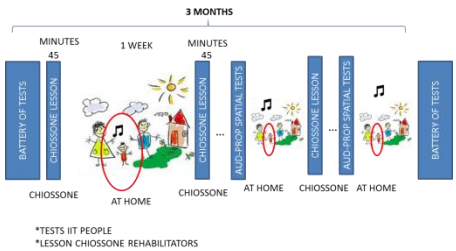
ABBI prototype set

The figure above shows the ABBI2 prototype set (ABBI device and smartphone)

ABBI2 is a programmable and wearable audio device with communication capacity (Bluetooth LE) and related firmware and software. ABBi is controlled by smartphone through the ad-hoc ABBI application. ABBI can play different sounds. In particular the set of preferred sounds obtained by the workshop organized by the University of Lund in Instituto Chiossone last May is stored in the memory and each child can choose which sound to play while using the bracelet.

ABBI Spatial rehabilitation

The spatial rehabilitation program started last September and ended just before the Christmas holidays. Twenty four children (6-17 years old) early blind and low vision participated at this 12 weeks rehabilitation program. Children were instructed of using ABBI for 1 hour per day (half an hour used by them self and the other half used by parents or another person). Every child was also participating in a special training session with the rehabilitators from the Instituto Chiossone for 1 hour per week.



The figure above shows a blind child performing an exercise.

Spatial and mobility tests were used to evaluate the interval improvement during the rehabilitation program with ABBI.

Audio and user evaluation

The University of Glagow has started to develop audio feedback designs that would facilitate multi-ABBI use (either for the same child or for several children), such as optimising perceptibility and differentiability. The University of Lund has explored how sound parameters can be varied in real time and in gestures. Through the workshop materials developed, it has also implemented a way of coupling sounds to tangible objects with different haptic/tactile properties. All these features will be added in the next ABBI prototype.

Dissemination activities

by The ABBI team

ABBI Project has been presented last July at the FENS, European Forum of Neuroscience, where the project coordinator, Dr. Monica Gori, participated as invited speaker. ABBI was also presented by the University of Glasgow at RNIB TechShare conference.

Multiple radio programs in Italy and UK have also interviewed Dr. Gori and her partners regarding the project.

ABBI will be presented next month at the International Conference on Enabling Access for Persons with Visual Impairment (ICEAPVI) that will be held in Athens, Greece.

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DETAILS

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