

## Promoting innovative assistive technologies internationally

Austria – AsTeRICS Academy for Cross-Cultural Education and Research in Assistive Technology

### SUMMARY OF PROJECT

The mission of the AsTeRICS Academy project is to foster international networking in the ICT-based Assistive Technology sector by implementing hands-on workshops with flexible open source assistive technology tools. These hardware and software tools have been developed and collected during the course of the project and enable people with severe physical disabilities to use a computer and to access e-learning platforms and educational resources.

*“The AsTeRICS Academy for Cross-Cultural Education and Research in Assistive Technology creates open source ICT-based accessibility solutions and makes these tools available to the public via construction sets, build instructions, and workshops.”*

— Mr. Miguel Gomez Heras, Chairman, AsTeRICS Academy

### FACTS & FIGURES

- Five workshops with 200 participants have been held during the last two years for end-users and end-user organizations.
- Four model building/technology workshops, and a Summer School for international student have been organized to date, and two barrier-free tech tools have been developed.
- Eight individuals have received tailor-made solutions that are fitted to their needs and used on a daily basis.

### PROBLEMS TARGETED

It is often difficult for people with disabilities to use non-accessible tools or to get available accessible tools at an affordable cost. This is especially a problem in low-income countries, in which the necessary technological infrastructure is often inadequate, and for families with a low household income. Moreover, the expertise for the application of ICT-based tools is often not available.

## **SOLUTION & METHODOLOGY**

The AsTeRICS Academy for Cross-Cultural Education and Research in Assistive Technology conducts product development, user evaluations, networking, and internationalization based upon the available AsTeRICS framework (the Assistive Technology Rapid Integration and Construction Set). AsTeRICS enables accessibility solutions involving techniques like face-or eye tracking, bioelectric signal processing, speech recognition and environmental control, which can be tailored to individual user needs and preferences. The project has created and developed a set of affordable open source tools that enable people with physical disabilities to use computers and smartphones easily. The tools are provided as construction kits during hands-on workshops organized in cooperation with partners from other countries; and demonstrations are given on how to use and build the tools on a local basis. "The FLipmouse" is a joystick to allow people with reduced physical capabilities to control a mouse cursor and a computer keyboard. The "FABI (Flexible Assistive Button Interface)" is a computer interface whereby up to six switches can be attached and assigned to cursor movements, key inputs, mouse clicks, scroll wheel activity, or other functions. To be affordable in low-income countries, these tools can be adapted by providing a rechargeable power supply or cell-phone compatibility, for example; and the usage of the most affordable electronic components and construction manuals make it possible to build one's own version of the offered tools.

## **OUTLOOK & TRANSFERABILITY**

The project will be finalized in September 2016, and the team is currently planning strategies to gain funding from sources other than the Municipality of Vienna. Further, to encouraging partners to use their resources to manufacture the tools locally, the project website is emphasizing the importance of crowd sourcing. Currently, the project team is working to improve the tools and to offer the construction kit online. At that point, the FABI device will cost about 15 Euro to build and the FLipMouse about 90 to 100 Euro, and could be built or recreated locally on a global basis. The AsTeRICS Academy project is partly funded by the Municipality of Vienna, MA23, Project Number 14-02.



The FABI tool

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