Using the AsTeRICS Configuration Suite, Assistive Configurations can be readily created by connecting functional blocks in a graphical editor.

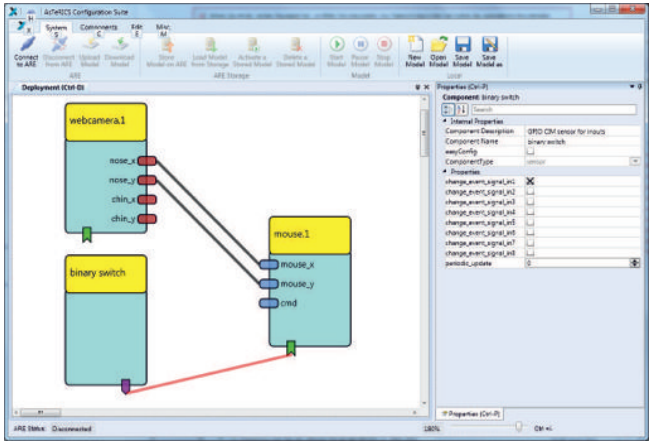

Figure 4: Screenshot of the AsTeRICS Configuration Suite - showing a model for camera-based mouse control

The ease of configuration makes AsTeRICS adaptable and easy to get started with. Meet Sławek - User with celebral palsy using AsTeRICS Personal Platform:

Figure 5: Sławek - uses AsTeRICS to control his cellphone

Sławek can switch from operating his phone to controlling the TV set without any help from a carer. Thanks to configuration of the AsTeRICS system that was prepared by a trained technician, the system can perform more tasks, like controlling Sławek's PC, radio set, sending text messages (SMS), opening the door or window and finally raise the alarm in case of emergency.

Figure 6: Sławek - uses AsTeRICS to control his TV set

An open source repository is available on the project's web site. Models for different use cases and plug-ins for many sensors and actuators are also available on the project web site.

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SEVENTH FRAMEWORK PROGRAMME

AsTeRICS

Assistive Technology Rapid Integration & Construction Set

AsTeRICS

European Commission
Information Society and Media

AsTeRICS

Assistive Technology Rapid Integration & Construction Set

AsTeRICS is a flexible and affordable construction set for developing user driven Assistive Technology (AT) solutions by combining emerging sensor techniques like Brain-Computer Interfaces and computer vision with basic actuators. AsTeRICS was developed in a project partially funded by the European Commission* and rated **excellent** by Commission's experts.
AsTeRICS is a construction set for assistive technologies which can be adapted to the motor abilities of end-users to overcome technology accessibility problems derived from limited mobility in their upper limbs. AsTeRICS enables access to different devices such as PCs, cell phones and smart home devices via suitable sensors connected to the Personal Platform.

AsTeRICS features:

- **Flexibility** in setting up a workable and convenient device set for a disabled person
- **Adaptive configurations** for changing circumstances (fatigue, environment, age, disease)
- Many standard **configurations** for typical use cases
- Integrating various **sensors** (switches, special mice, joysticks, BCI devices etc.)
- Connecting to many **actuators** (PC, IR enabled home appliances, etc.)

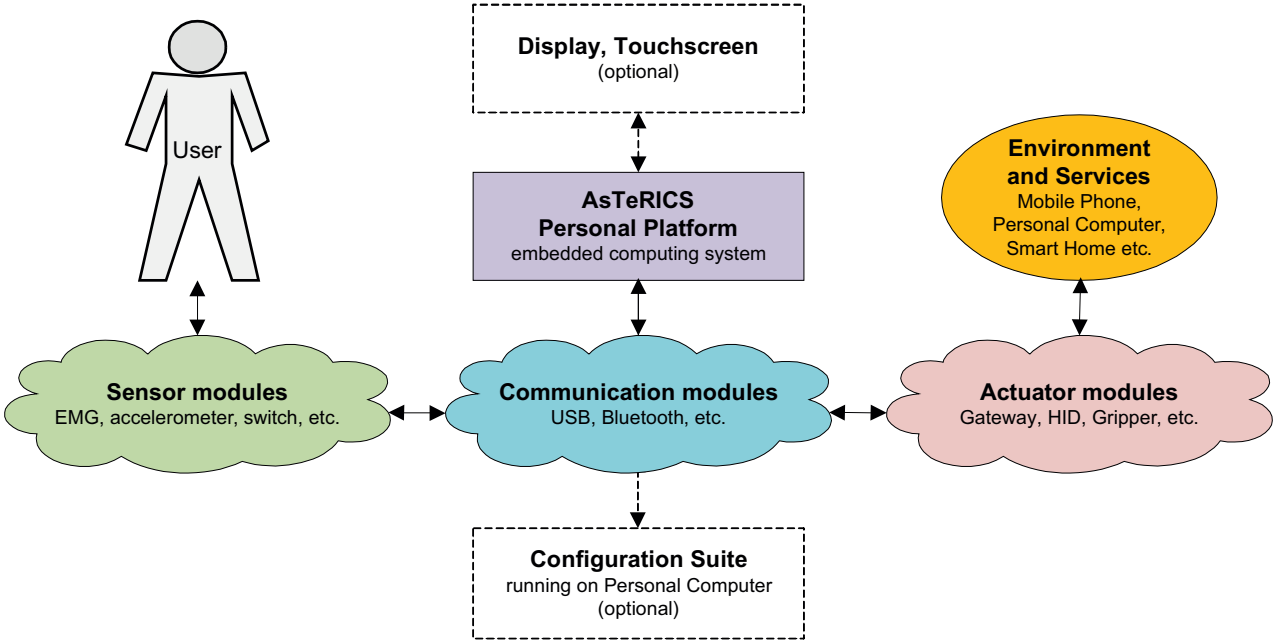

Figure 1: Concept of the AsTeRICS modular Assistive Technology system

This is achieved with a system architecture composed of modular functional hardware and software components well suited for utilisation in various Assistive Technology applications.
The system supports many different sensors and actuators which can be combined as desired.

Figure 2: Some sensors supported by AsTeRICS

Sensors include camera based head- or eye-tracking, Brain- and Neural Computer Interfaces (BNCI), sip/puff- and flex sensors, special mice, joysticks and digital switches.
Actuators include mouse- and keyboard emulation for computer use, infrared and smart home control, mobile phone access and mechatronic manipulators.

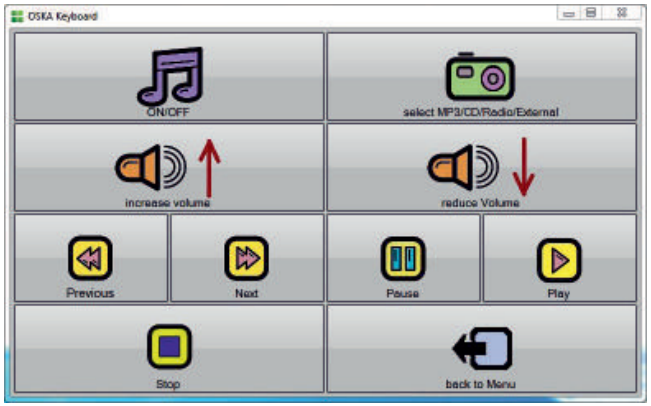

Figure 3: OSKA with a keyboard for controlling a stereo set