



28 May 2007 A pioneering system allows autistic children to communicate with their environment

Communication ability among children who are intellectually disabled or have communication limitations (such as autism, down syndrome, or cerebral palsy) may soon be improved thanks to a research group of the University of Granada (Universidad de Granada [<http://www.ugr.es>]). SC@UT, which stands for Augmentative and Adaptive Communication System, has been created by the following researchers: 13 lecturers from the UGR Computer Engineering School (ETSI), ASPROGRADES association and a team of psychologists, psycho-pedagogues, and speech therapists. All of them are headed by professor José Juan Cañas Delgado, lecturer of Ergonomics of the department of Experimental Psychology and Behavioural Physiology of the UGR [<http://www.ugr.es>] and professor María José Rodríguez Fortiz, lecturer at the department of System Informatics. SC@UT, software for augmenting communication by computer devices (PCs, laptops, PDAs, etc.), is designed for children with special communication and educational needs, such as those who suffer from autism.

“This is a project promoted by the Regional Government of Andalusia which attempts to reduce differences between disabled and non-disabled people”, states professor Cañas Delgado. “We have created a configurable parameter tool that allows disabled people to interact with their environment. In this way, their adaptation to a world full of barriers is much easier. In present world, social and labour integration is impossible without communication and access to education.”

The functioning of SC@UT is easy: through a PC (or even better, a PDA) parents or tutors can download the specific software from the website <http://www.ugr.es/~scaut/>. After this, the device is ready to be used as a means of communication between the child and society. Thanks to the SC@UT project, the child can express such needs as going to the toilet or hunger, as well as such states as being happy, sad, or tired. SC@UT includes a speaker which transmits the “user’s comments” to the listener.

Less aggressive

Prof. Cañas Delgado states that when communication improves, disruptive behaviour in disabled children decreases. Consequently, the use of that display could also diminish aggressiveness in autistic children. “Many of them injure themselves and present aggressive behaviour because they become frustrated when they cannot communicate with others. If they could communicate through SC@UT, this problem would disappear.”

At the moment, this initiative has started to work as a pioneering project in 16 schools of the Southern Spanish provinces of Granada and Jaen. However, the Regional Government of Andalusia wishes to implement this project throughout the whole region. “SC@UT technology tries to overcome the problems of the previous systems: it is adaptive, portable, and inexpensive. With a proper device, the user can download the software free of charge.”

At present, the developers of SC@UT are studying the possibilities and profits of this system, which will soon be used by children and adults with cerebral palsy as well as by adults who cannot speak for several reasons (heart attack, thrombosis, etc.).