Electronic robot personified in image of favourite teacher

Scientists aim to teach pupils via intelligent training system

By Piotr Dovlatov

Of course, a personal e-tutor with artificial intelligence, can't replace a regular teacher. However, it can help pupils master certain subjects more quickly, encouraging them to learn independently and form a particular picture of the world. Such improvements in the teaching of schoolchildren and students are being developed at the Belarusian State University of Informatics and Radioelectronics' Department for Intellectual Information Technologies. Using the experience of the best lecturers in each field, an intelligent training system is being tested.

This contains an extensive database in addition to navigation and search methods, algorithms for knowledge processing, methods and strategies for task solution and an accessible interface for users. The system can track each individual's work stage-by-stage and, on finding a mistake, can select a reason for the misunderstanding, offering further training materials for home study and recommendations on how to use them. This should

Schoolchildren keen to use electronic textbooks and other innovations

considerably reduce time spent studying while enhancing its effectiveness.

The BSUIR also plans to join forces with the Belarusian National Academy of Sciences' United Institute of Informatics Problems, to 'clone' teachers. The Head of the Belarusian State University of Informatics and Radioelectronics' Department for Intellectual Information Technologies,

Vladimir Golenkov, explains, "Dialogue between users and the training system is currently conducted via written messages. However, it would be great to supplement this with a speech synthesiser, allowing us to reproduce the voice and, even, facial expression of a person (to appear on a monitor). Experiments regarding speech cloning and the placement

of synchronised facial expressions are being run under the guidance of Doctor of Technical Sciences Boris Lobanov."

He continues, "It won't take long to combine our developments. Importantly, students will more readily accept guidance from an e-teacher which replicates the personality of a human lecturer (known or otherwise). We can reproduce the manner and style of individual teachers, including their polemic approach, common phrases, use of hesitation and, even, deviations from normal pronunciation. Pupils will have the illusion of chatting with a living person. Of course, we'll need to ask permission from teachers. Some might question whether robot-teachers are necessary, since living teachers are to hand in the classroom, able to advise and assist. We believe that they are needed — even more than some might think. Education needs to keep pace with the latest technology, which can be difficult for teachers. Meanwhile, an intelligent training system can be automatically updated via the Internet."