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## **DEVELOPMENT OF TECHNOLOGIES FOR DISABLED IN THE SPHERE OF COMPUTERS**

One of the main priorities of the world is the desire to build a people-centered, open to all and development-oriented information society in which everyone could create and accumulate information and knowledge, have free access to them, use and

exchange them, to enable each a person to fully realize his potential, promoting social and personal development and raising the quality of life [3].

Some researchers consider that many things which 30–40 years ago seemed to us only as a fruit of fantasy writers, will so firmly enter our lives. Powerful and at the same time small computers, video communication, flat-screen TVs, ATMs, social networks, etc. But technologies are not in place, but only accelerate the move [2].

Objective: take a look at different aspects of using computer technology for people with disabilities.

We are now living in what some people call the digital age, meaning that computers have become an essential part of our lives. With their help: we visit shops and offices; we pay bills prepared by computers; just picking up a telephone and dialing a number involves using of a sophisticated computer system, as does making a flight reservation or bank transaction [1, p.2-3].

But what happens if a person is blind, deaf or motor-disabled? They needn't worry. The latest assistive technology is designed to help them use computers and do their jobs in the office, learn at school or interact with their families at home. In addition, new laws oblige companies to adapt the workplace to accommodate disabled people, for example, the Americans with Disabilities act (ADA) and the U K's Disability Discrimination Act make it illegal for employers to discriminate against people with disabilities.

To work effectively, most blind users need to have their computers adapted with technologies such as Braille, screen magnifiers, speech synthetic and Optical Character Recognition (OCR).

Braille keyboard have Braille lettering on keyboard overlays, allowing blind users to easily identify each key. For output, there are printers, called Braille embossers, that produce textile Braille symbols on both sides of a page at high speed.

For someone with limited but usable vision, a screen magnifier may be appropriate. This type of software can enlarge text and images appearing on the screen by up to 16 times.

A speech synthesis system is used to read aloud the work on the computer. It has a speech synthesizer, which produces the audio output, and a screen reader – the program which reads aloud text and menus from work processors, databases and the Web.

OCR uses a flatbed scanner and specialized OCR software to read printed material and send the text to the computer. The PC can then produce the copy of the text in Braille, a magnified copy, or a version that can be read aloud by speech synthesis system.

Deaf computer users can overcome many communication difficulties with the aid of visual alerts, electronic notetakers and textphones. Visual alerts are indicators that alert the deaf user when they receive new mail or when there is a system error. So instead of hearing a sound, the user is alerted by blinking menu bar or by a message on the screen. Electronic notetakers use software that types as summary of that what is said in meetings onto the computer screen.

Finally, there is voice recognition, which allows the computer to interpret human speech, transforming the words into digitized text or instructions [1, p.43-44].

Consequently, many things that were decades ago were only someone's fiction has become a reality not only for fantasies, but also for the widely used use.

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