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ДЕРЖАВНИЙ ДЕПАРТАМЕНТ ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ

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Feedback on the use of the scanner “ScanRobot SR301”

A sequence of actions directed towards the implementation of the paperless technologies in record-keeping are provided by the concept of the development of the automatization and implementation of the technologies in the State Enterprise “Ukrainian Intstitute of the Industrial Property” in the years 2008-2012.

These actions foresee the implementation of the electronic system of technical document flow, scanning and digitalization of the national patent applications which are stored in the paper archive, the creation of the electronic informative fund of the patent expertise. Besides such big projects as the creation of the digital patent library and the acquisition of the international search institution and the institution of the international preliminary expertise status by the Institute have been initiated. These projects require accumulation of a big amount of informative patent resources.

The informative resources stated above will be formed to a great extent based on scanned paper sources. The quantity of these sources will amount up to tens and even hundreds of thousands of items. These are separate books, articles, brochures, magazines, journals.

It’s worth stating that no fast-speed scanner of the continuous document scanning is suitable for scanning books and magazines. When scanning them on the flatbed scanner the effect of the “book layout” appears which affects the quality of the text recognition. Besides, when scanning books on the flatbed scanner it is possible to flip pages only by hand which decreases the productivity of the scanning process.

Considering all the reasons stated above, specialists from the Institute have researched the market of scanners for scanning books without breaking their integrity.
The scanner “ScanRobotSR301” has been chosen based on the analysis of the technical characteristics and price criteria for the needs of the UkrPatent Institute.

The use of the scanner guarantees careful handling of printed sources such as encyclopedias, reference books, dictionaries. The sources are different in format, print, paper (thick or thin), binding (including soft parchment and paper binding). The scanning process allows the angle of the open book not more than 60 degrees. The optical prism unit is carefully lowered into the book, the pages of the layout are lifted by the airflow and are scanned when the prism moves upwards. Then the pages are flipped by the airflow and all the process is repeated again. This way the flipping and scanning is organized as a single process. The airflow is constantly provided between the pages of the book, so the scanning takes place almost in a no-contact way. This eliminates the possibility of damaging the printed sources.

ScanRobot has a high speed of scanning. The main factors that influence the speed of the robotized handling of books are the format of the published sources and the construction of the binding. When processing incessantly the scanning speed is from 1500 to 2500 pages per hour (25 to 42 pages per minute). The bigger the format of the book is, the smaller the speed of scanning is and vice versa. The quality of the printed source binding also influences the scanning speed. When scanning, the book has to be fixed steadily in the device. This matters for the quality of the electronic copies as well.

The scanner provides the same speed of the coloured and black-and-white scanning.

The digitalization of the books is done with the help of the special software ScanGate that was designed for the automatic book scanner ScanRobot. But it is also possible to import, manage and process pictures scanned in the flatbed scanner with the help of ScanGate. For instance, the cover pages were scanned on the flatbed scanner which was impossible to do on ScanRobot.

It’s worth emphasizing the broad functional possibilities of the software and user-friendly interface. ScanGate provides the individual approach in choosing the profile of the scanning for each book and a possibility of the following picture processing. Besides, the profiles of the device can be saved for further scanning of different kinds of books. All these features provide a high quality level of the digitalized sources and the productivity of the robotized document processing.