



**INSTITUTE OF AUTOMATION AND ELECTROMETRY
OF THE SIBERIAN BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES
(IA&E SB RAS)**

**MOBILE DEVICES FOR IDENTITY DOCUMENT
AUTHENTICITY CONTROL**

A mobile device for control of authenticity of identity documents with the possibility of remote data transfer in a spatially- distributed network has been worked out.

The devices provide with:

- efficient acquisition of high quality digital images of document pages in visible, UV, IR spectral ranges (in passing / reflected light) ;
- efficient information processing with the purpose of picking out photos, machine-readable lines, special concealed images;
- reading information from an electronic non-contact RFID chip, including the photo of the owner of the document;
- representation of the information necessary for the operator for identification;
- transmission of the findings to the distributed network server by the wireless WiFi- interface (or through the cellular channel 3G/4G).



The appearance of the devices of the first and second generations

Specifications (crucial features of the instruments):

- high resolution of photo matrix – 14.5Mpix;
- high optical resolution-460dpi;
- high reliability of comparison of the read out images with those available in special reference data bases;
- high speed of information processing – 3-5 seconds per document (when reading the image of a document and information from a biometric chip);
- multispectral control of documents-optical radiation, IR radiation(0,85-0,95mkm), UV radiation (0,25 and 0,36mkm);
- high speed wireless transferring of obtained data through 3G,4G,WiFi networks for subsequent processing at remote servers;
- an opportunity of a battery-powered mode (battery life time more than 3 h).

Technical appraisal and economic benefits:

- high functionality;
- high reliability and record specifications at small dimensions, weight, and power consumption;

- fast data transmission to the server over a radio channel not less than 1500m.

Product area:

Control of the documents on transport, in the banking sector, during mass sport events, border control.

The realization level:

The test sample.

The preproduction test of the test samples of a mobile device for document authenticity control have been carried out both in the stationary mode and in a moving railway transport conditions at the Vyborg border crossing point. Full compliance with the international requirements to devices of the given purpose has been shown. The personnel of the customs have given their good references. Today, there are necessary capacities for the serial manufacture of the device at one of the Novosibirsk plants. The management of the plant is ready to start at the presence of a guaranteed order. The modular principle of the construction gives an opportunity to work out and start the production of the modification of the device with the required technical characteristics necessary for particular applications in a short time. Both mobile and stationary versions of the device are available.

Patent protection:

Patent # 96268 “A mobile device for reading the information from identity documents” (IAE SB RAS).

Patent # 101226 “System of identity documents control”.

Commercial offers: License agreement; transfer of know-how; joint production;

Estimated cost ~ 320000 rub.