Russian Seafarers' Identity Document System

PREFACE

Seafarers' Identity Document System (SID System) is the part of State System of producing and control new generation passport-visa documents (State System). The main contractor and developer of creating of the State System is the "NII Voskhod". SID System has been developed by GazIntech for Russian federal agency of sea and river transport.

The project of development State System started in the Russia in 2005. The goal of this project is to create unified interdepartmental information system that supports implementation in the Russia electronic biometric passports and biometric visas and other documents.

SID System base on technological platform of State System and use common components: certification authority, training center, support center and control center.

SID System takes into account all requirements of Convention 185 (Revised).

Main members of the SID system project:

Ministry of Information Technologies and Communications of the Russian Federation – general Customer of State System (www.minsvyaz.ru, office@ptti.gov.ru);

Federal Agency of Sea and River Transport - Customer of SID System (www.morflot.ru, info@morflot.ru)

State unitary enterprise "NII Voskhod" – system integrator of State System (www.voskhod.ru, info@nii.voskhod.ru);

GazIntech Co. – main developer of the SID System (www.gazintech.ru, info@gazintech.ru).

At this time pilot area of the SID System is starting. Pilot area includes: Maritime Authority of Kaliningrad and Russian maritime security service (Moscow).

SID system includes 26 issuing places in the Russian Federation, 2 Coordination Centers (main and reserve) in Moscow.

ARCHITECTURE OF THE SID SYSTEM

SID System is hierarchical territorial-distributed information system. SID System includes:

- **SID issuing places that perform issuing and control;**
- **Mobile SID control places;**
- **Federal Data Processing Center – supports functioning of the National Electronic Database and Coordination Center according with Convention 185.**

All objects are linked by means interdepartmental secure network.

SID ISSUING

SID issuing place includes following equipment:

- **Biometric data registration station;**
- **Biometric booth;**
- **SID print station;**
- **SID issuing and control station;**
- **Other stations;**
- **Servers;**
- **Cryptographic equipment;**
- **Telecommunication equipment.**

SID issuing process includes following steps:

- **Step 1 - Seafarer fills in the questionnaire and passes procedure of photographing, getting fingerprints and sign. Photographing includes photo transformation process to meet to ICAO requirements;**
- **Step 2 - Seafarer's data come to an agreement with federal agency of sea and river transport and other departments about decision of producing SID;**
- **Step 3 - SID is printed;**
- **Step 4 – SID is examined for it is a machine readable document;**
- **Step 5 – Seafarer passes verification procedure and receives SID;**
- **Step 6 – Data about received SID are submited to national electronic database;**
- **SID control procedure includes steps: reading SID, getting seafarer's fingerprint, making request to national electronic database, comparing SID data, seafarer's data and data from national electronic database.**

Biometric data of seafarer is obtained in special equipment – biometric booth.

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Biometric parameters include (see Fig.1):

- **Digital color photograph. Light regime and face positioning in biometric booth meet to ICAO requirements.**
- **2 fingerprint. Biometric template is created according with ILO SID – 0002. This template is encoded in bar-code, which placed on face side of SID.**

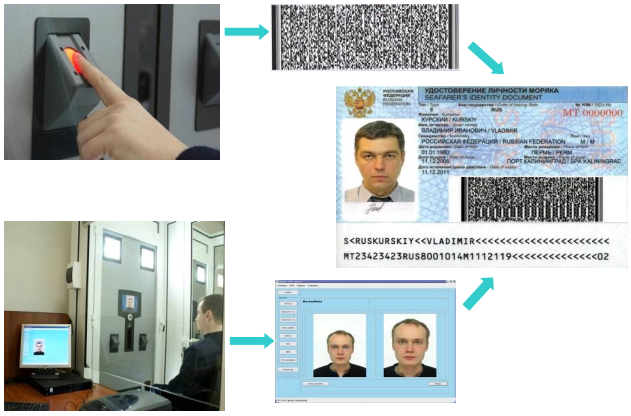

Fig.1. The biometric data used in the SID system

FEDERAL DATA PROCESSING CENTER

Federal Data Processing Center includes (see fig.2):

- **National Electronic Database;**
- **Coordination Center.**

The main goal of the National Electronic Database is registration data of seafarers' identity document issued, suspended or withdrawn, according to Convention 185.

Coordination Center shall designate a permanent focal point for responding to inquiries, from the immigration or other competent authorities of all Members of the Organization, concerning the authenticity and validity of the seafarers' identity document issued by its authority.

Fig.2. National electronic database

SID SYSTEM SECURITY

Requirements of protection of personal biometric information are realized by means:

- **application based logon with username and password;**
- **all important steps are signed using electronic digital signature;**
- **using cryptographic transformations during the process of information interchange between SID issuing places and federal processing center;**
- **using diskless client station. All information is processed and saved on server;**
- **using unix-based operating systems, certified by competent Services of the Russian Federation;**
- **electronic digital signature version control of system component.**

RESUME

SID System takes into account all requirements of ILO documents: Convention 185 (Revised), technical report ILO SID - 0002;

SID System is the one of the first systems, which really operates with digital biometric data - fingerprint templates (see Fig.3);

SID System is the territorial-distributed information system with 2 hierarchy levels: territorial (SID issuing places) and federal (Federal Data Processing Center);

Total number of SID issuing places – 26;

At this time pilot area of SID System is starting. Pilot area includes: Maritime Authority of Kaliningrad and Russian maritime security service (Moscow).

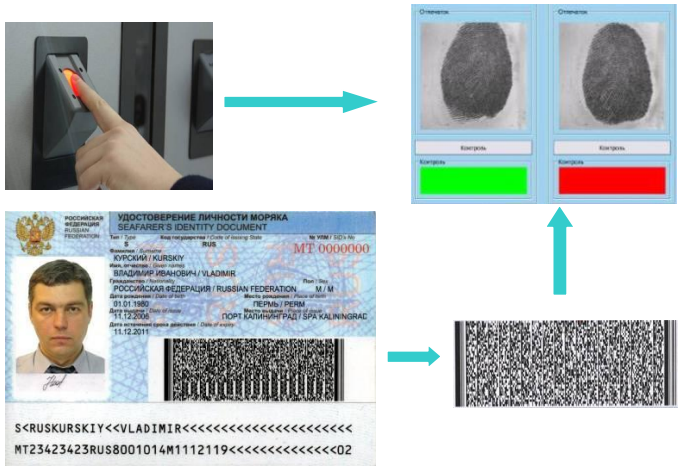

Fig.3. Process of verification of the SID with use of fingerprints

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