

## Data Input Project for Novosibirsk Mayor's Office



ATAPY together with "Zolotaya Korona", a Russian nationwide retail electronic payment network, conducted a project for the Novosibirsk Mayor's Office.

Designed to modernize the procedure for public transportation fare collection, the project introduced electronic passes with microprocessor plastic cards for use on subways, buses and trolleybuses.

A primary challenge was the large number of passengers with social security benefits and discounts. The Novosibirsk Public Transportation Authority compensates carriers for these passengers from the city budget. One of the goals of the "Transportation Pass" project was to retain the benefits/discounts plan for people who were entitled to them while providing a precise and convenient mechanism for gathering transportation statistics on these passengers. It was also important to eliminate opportunities for fraud, as this was a weak point in the previous transportation pass system.

"Zolotaya Korona" offered a solution based on contactless microprocessor cards with personalized cards for citizens entitled to benefits/discounts and generic cards for regular passengers. "Zolotaya Korona" issued separate types of personal cards for each category of beneficiary: students (the Student Transportation Pass), school children (the School Child Transportation Pass) and social security beneficiaries (the Social Security Transportation Pass).

There was another challenge. To obtain a personal transportation pass, a person had to fill out a machine-readable form. "Zolotaya Korona" would receive tens of thousands of application forms that needed to be

processed quickly and with a high degree of accuracy. An additional requirement was that a color photo of the applicant be stored in the database.

The "paper flood" peak was expected when Student Transportation Passes were issued. To deal with this, "Zolotaya Korona" turned to ATAPY Software, a data capture company with a proven track record.

The data capture process involved the following phases:

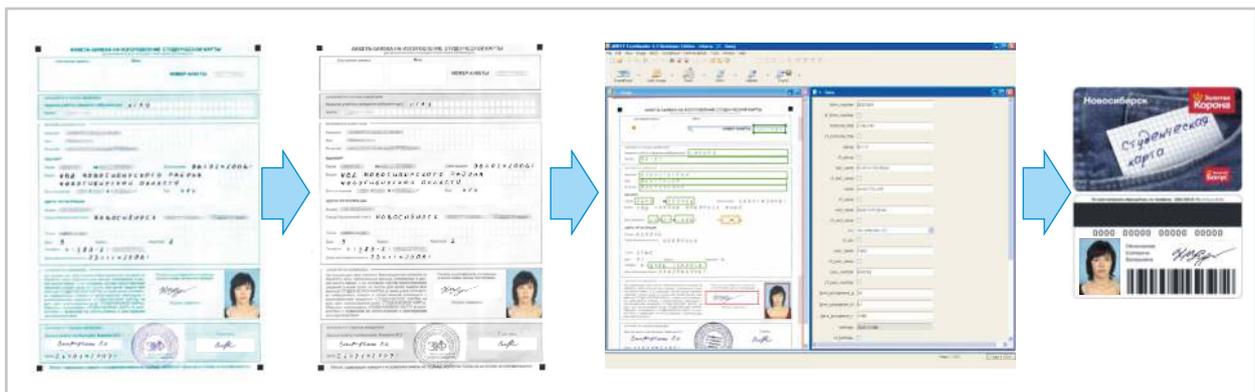
1. Filling-in the form by applicant (in handprint)
2. Scanning
3. Machine recognition
4. Vrification of recognized data
5. Export to the database
6. Card production

### Card issue

Working in close cooperation with engineers from



"Zolotaya Korona", ATAPY developers helped to design a machine-readable application form to be filled in by students in Phase 1. The form was specially optimized for processing by the ABBYY FormReader. Next, ATAPY engineers developed a special pre-processing algorithm to be applied to form images between Phases 2 and 3. It removed the color background from the form and improved the hand-printed text recognition quality while retaining the colored photo. The procedure allowed for significantly reduced form



processing turnaround time during Phases 3-5 (recognition and verification of data using ABBYY FormReader) while ensuring the high accuracy of the captured data.

Thanks to the combined efforts of “Zolotaya Korona” and ATAPY Software, Novosibirsk students can now travel on all means of transportation using the Student Transportation Pass without reaching for money, a student ID or entering a PIN code.

In the near future, “Zolotaya Korona” plans to replicate this valuable experience in other Russian cities.



*Zolotaya Korona is a Russian nation-wide retail electronic payment network uniting 220 banks from 75 regions of Russia, CIS and foreign countries. “Zolotaya Korona” cards are accepted in 273 cities in Russia as well as in Ukraine, Belarus, Kyrgyzstan, Mongolia and China. The “Zolotaya Korona” system was established in 1994 by the Center of Financial Technologies.*

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