



RFID solution

for marking small architectural forms



Project «Comfortable urban environment»



“The physical condition of the yard territory and the need for its improvement is determined by the results of the inventory of the yard territory, carried out in the manner established by the subject of the Russian Federation”

Decree of the Government of the Russian Federation of February 10, 2017 No. 169 requires everyone who wants to receive subsidies for the project “Formation of a comfortable urban environment” to take an inventory of the territories of municipalities (squares, embankments, streets, pedestrian zones, parks, courtyards, other territories).

An inventory of the territories of municipalities is a laborious and technically challenging process that must now be carried out on an ongoing basis.

Benefits



- Work in accordance with the requirements of the Government of the Russian Federation
- Fully automated processes
- The ability to mark, search, inventory and select objects marked with RFID tags
- Fast tracking of small architectural forms
- Quick inventory and picking verification
- Reduced labor use
- Operational control
- Human factor excluded

RFID tags

Tags for dielectric surfaces :



CandyTag

Sizes: 96x21 mm

Registration range: up to 12,5 m

Tags on metal and items containing electronic fillings :



IT-2

Sizes: 51x28x10 mm

Registration range: up to 3,5 m



PatchTag

Sizes: 191x29x22 mm

Registration range: up to 29 m



TargetTag

Sizes: 70x18x1,4 mm

Registration range: up to 6 m

RFID equipment



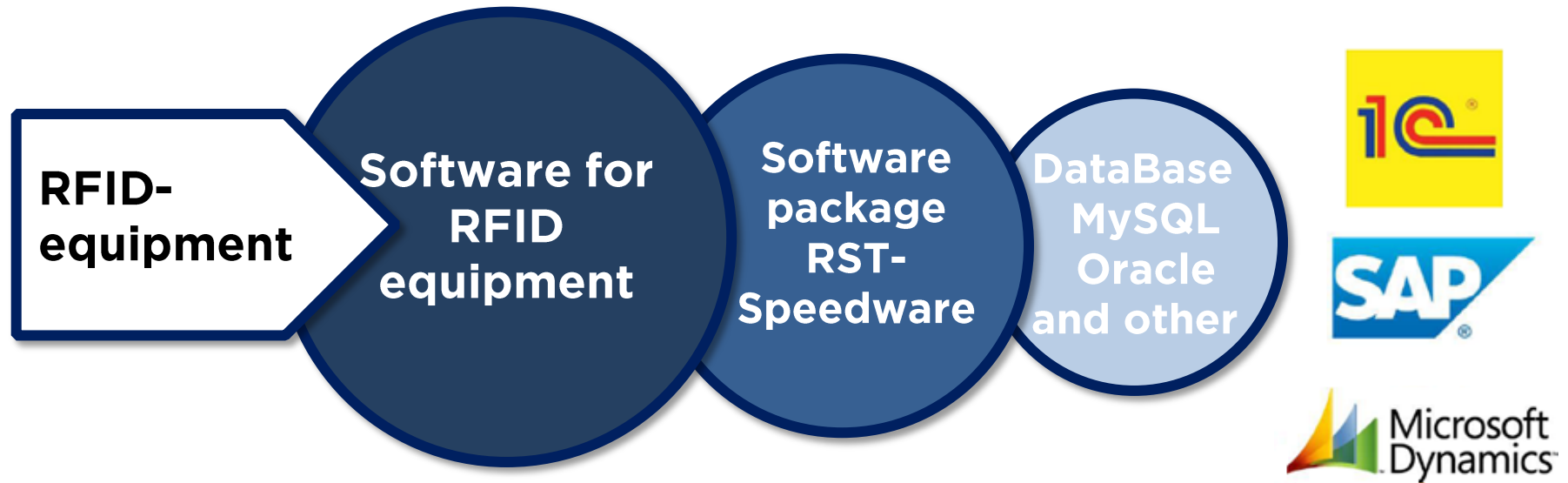
Designed for reading RFID tags in conditions without access to power sources, as well as outdoors.

Benefits:

- Read RFID tags during product search
- Inventory
- Automatically transfers data on all operations to the RFID system via wireless Wi-Fi or GSM
- Allows to read RFID tags autonomously



Software architecture of the RFID solution



Software RST-SPEEDWARE



Middleware for collecting data from all readers and storing information in the database.

RST-SPEEDWARE receives from the database tables tasks for a particular reader to perform operations with RFID tags, sends the specified tasks to readers, monitors the execution of tasks, and saves the results of tasks in the database.

RST-SPEEDWARE performs the functions of:

- Saving the results of registration of RFID tags in the database
- Saving the results of operations on RFID tags in the database (writing, reading, blocking, etc.)
- Saving in the database diagnostic information about the status of the reader
- Transfer of data and commands from the database tables to a specific reader

Software RST-INVENTORY



The software is designed to control the mobile reader.

Its configures the reader and controls its operation based on commands received from RST-SPEEDWARE software.

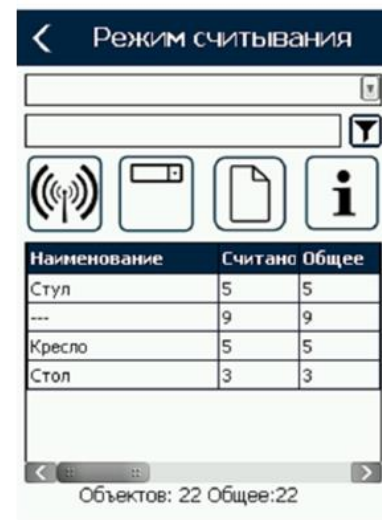
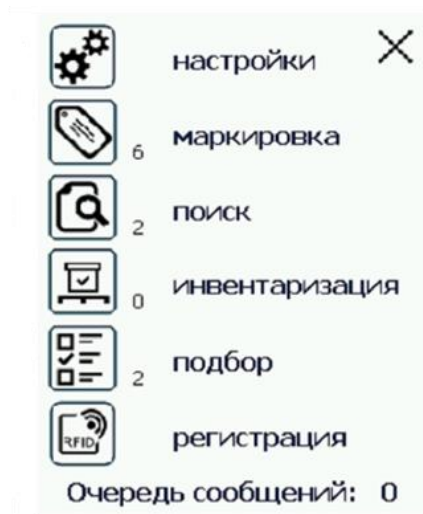
RST-INVENTORY software performs the functions of:

- Information exchange with RST-SPEEDWARE
- Processing of registration results of RFID tags and operations on them
- Marking objects with RFID tags
- Search for objects marked with RFID tags
- Selection of objects marked with RFID tags according to nomenclature positions
- Inventory of objects marked with RFID tags
- Reader configuration
- Saving the results of the execution of commands in the memory of the reader in the absence of communication with the RST-SPEEDWARE

Software RST-INVENTORY

RST-Inventory-records identifiers in the memory of RFID tags and sends data about performed actions to the external information system.

RST-Inventory integrates with the customer's existing accounting system.



Marking

In marking mode, RFID tags are glued onto accounting objects and their identifier code is compared with the name in the inventory sheet. As a result of marking, the read RFID tag will be assigned the item nomenclature of the object from the IP. After sending the report, this information will appear in the IS.

Stages:

Номер	Идентификатор	Дата	Тип
18233	AE8832D	12.03.20	Догово
18233	AE8832D	12.03.20	Догово
9462	LO6G545	13.03.20	Догово
9462	LO6G545	13.03.20	Догово
9462	LO6G545	13.03.20	Догово
1283	mark176	08.08.20	Догово

Creating tasks

Наименование	Система	Общее
Стул	0	10
Телевизор	1	1
Клавиатура	1	1
Доска	0	2
Стол	1	1

The choice of the task for marking

Наименование	Система	Общее
Стул	0	10
Телевизор	1	1
Клавиатура	1	1
Доска	0	2
Стол	1	1

Selecting a marked product from the list

Номенклатура: Стул

EPC RFID-метки текущее значение

Новое значение

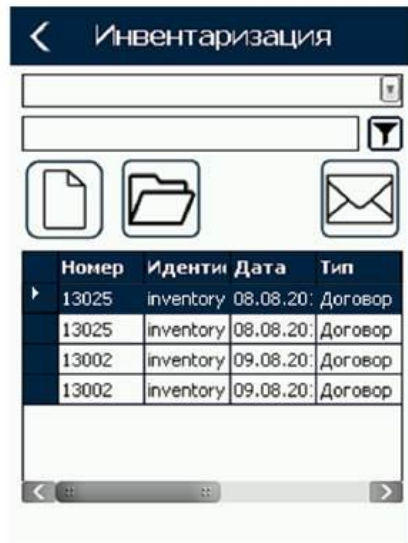
Дополнительная информация

Recording mode

Inventory

The inventory mode is the main component for conducting an inventory, search and write-off of fixed assets of the enterprise. As a result of the actions taken, a report is generated on the correspondence of information from the IP to the actual presence of objects in a specific location. Also, if the reader detects objects that are irrelevant to this location, the system will automatically notify the user of this and send a notification to the IS.

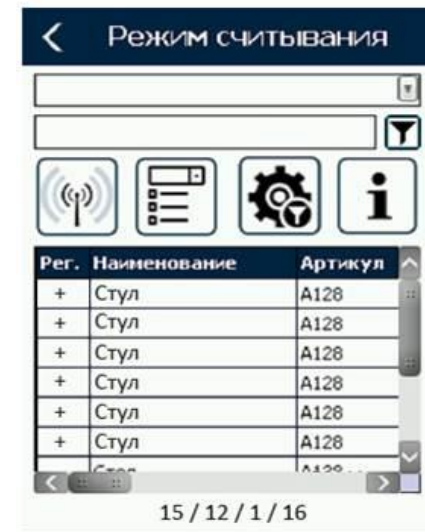
Stages:



Selecting an inventory task



Object reading mode

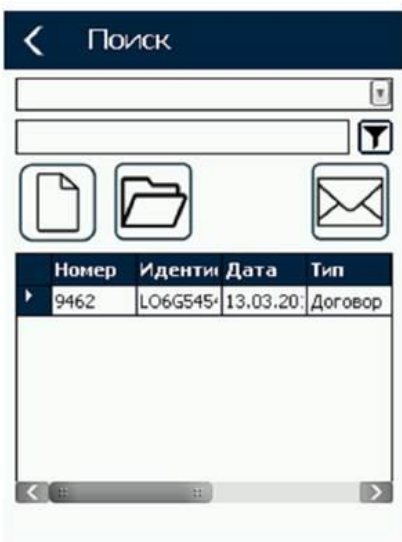


Filtering by item

Search

Carries out an accurate search for accounting objects recorded in the inventory sheet. As a result of the actions taken, a report is generated on the availability of a particular object. Also, if the reader detects objects that are irrelevant to this location, the system will automatically send a notification to the IS.

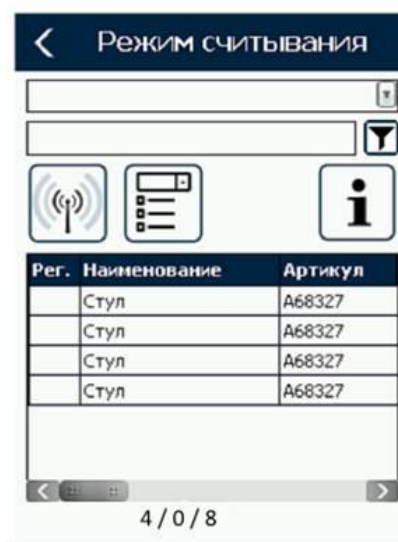
Stages:



Selecting a search task



Object reading mode



Filtering by item and displaying the expanded list

Company introduction

RST-Invent – is a Russian RFID-tags and equipment vendor, RFID-system and software developer.



Work experience since 2005



Own RFID-tags and equipment facilities in the Leningrad region



**Geographic reach:
RF, USA, Asia, Europe**



**A full cycle of competencies in RFID:
from the development of the element
base to the implementation and
maintenance of ready-made solutions**

"RST-Invent" company - is part of the Group of "Systematic"

GCS

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