Overseer Traffic

Distributed video supervision and plate number recognition system

Tasks solved by the system

- Traffic flow control and analysis;
- Capturing traffic rule violations;
- Detection of wanted vehicles;
- Recognized number plates archiving.

Features

- Number plate recognition;
  Number plate recognition for standard number types of more than 30 countries from Europe, America, Asia and Oceania. See detailed information in Supported_countries_en.pdf.
- Maintaining a recognized number plate database;
- Archive search;
- Wanted vehicles list creation;
  Possibility of operational car adding to the wanted vehicle database.
- Visual and sound notices for an operator;
- Automatic database update on posts;
  Database is updated for all the stationery and mobile post.
- Centralized control of surveillance points;
- Operational transport flow surveillance, statistical data gathering and analysis;
- Organization of mobile surveillance and recognition posts;
- Capturing speed limit violations;

  For speed detection of passing vehicles it is recommended to use "Iskra-1" DA-210 or "Rapira-1" radars.

- Capturing vehicle moving on the red light.

Optionally available

- Work with external devices;
- Automatic detection of traffic rule violations (speed limit violations, double solid line crossing, turning in the wrong place, railway crossing while the bar is down, etc);
- Automatic generation of traffic rule violation reports;
- Overlaying of the post distribution scheme on the city map and alarm signal appearance on the map;
- Tracking of car movement in the city, overlaying data on the map;
- Video data recording;
- Video data transfer over network;
- Vehicle color detection;
- Vehicle marque detection;
- Vehicle type detection.

Moreover, number plate recognition system can be integrated with city transportation control system that allows:
- Optimization of traffic light operating modes;
- Centralized control of the traffic lights, information boards, and controllable traffic signs;
- Prevention of the traffic jams;
- Putting operational information on the united map;
- Remote organization of "green corridors" and road closures;
- Capturing road sections that have high accident rate and providing statistics on violation types;
- Gathering statistics on traffic density, vehicles types and speed.

Configuration
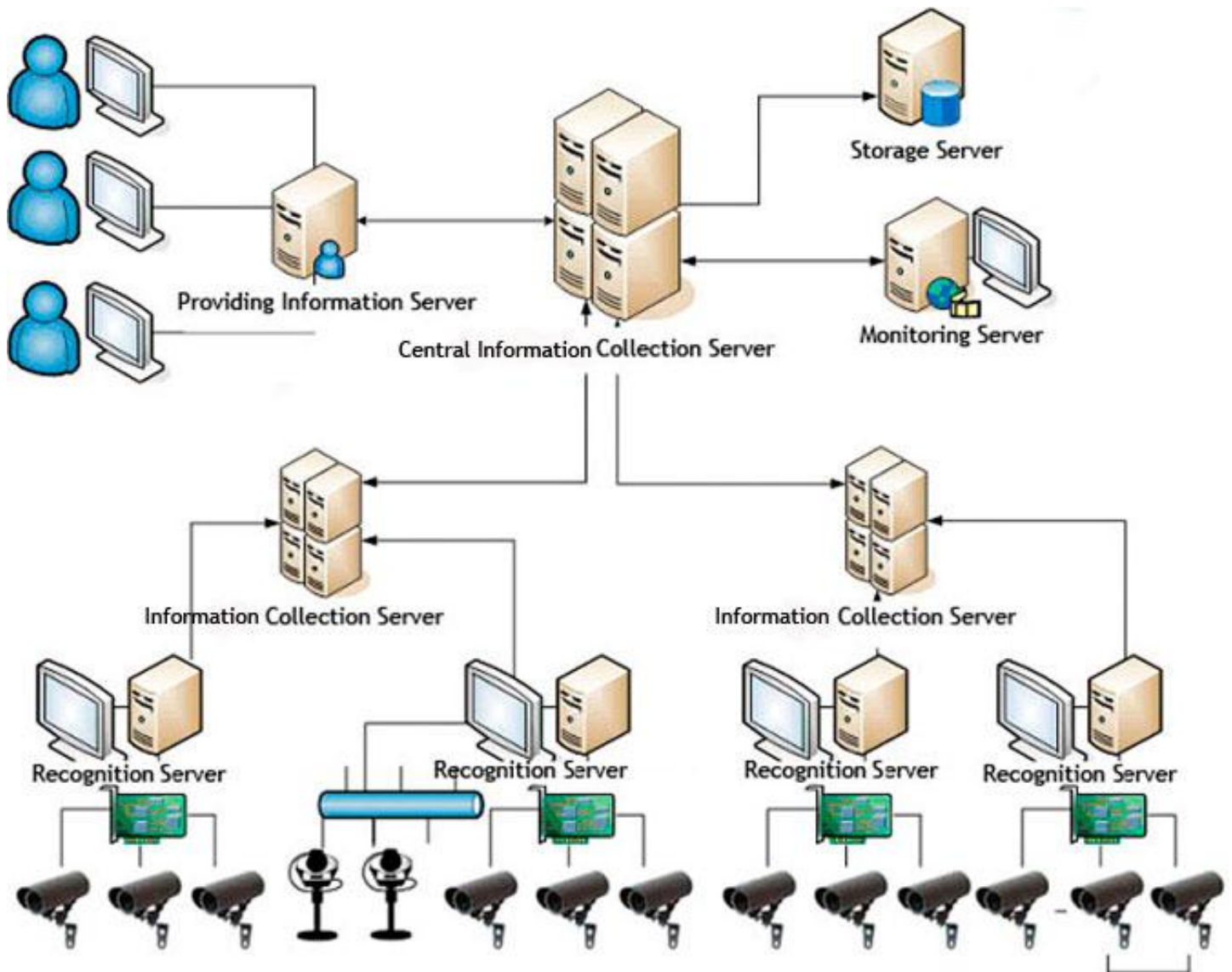
Central Information Collection Server gathers data about recognized cars and alarm events from application servers and transmits operationally formed database of wanted vehicles to them.

The following information is stored in the archive. Central Information Collection Server gathers data about recognized cars and alarm events from application servers and transmits operationally formed database of wanted vehicles to them.

The following information is stored in the archive of recognized vehicles: recognized number plate (text version), date and time of recognition, post and camera by which recognition was carried out, moving direction of a vehicle. Presence of an operator is obligatory.

Information Collection Server is a separate server/a few servers, placed in the state road police department. It receives all data on recognized number plates and alarm reactions from the operational data processing servers.

The following information is stored in the archive of recognized vehicles: recognized number plate (text version), date and time of recognition, post and camera by which recognition was carried out, moving direction of a vehicle. Presence of an operator is optional.

Operational Data Processing Server or Recognition Server analyses data from cameras, compares recognized number plates with operational database, and stores local database of recognized number plates.

The following information is stored in the archive of recognized vehicles: recognized number plate (text version), date and time of recognition, post and camera by which recognition was carried out, frame from which recognition was carried out, and moving direction of a vehicle. Presence of an operator is optional.

Installation is possible in two variants:
- **With operator's workplace:** inside the control post building or duty division. Alarming signals are sent either to an operator being duplicated to the data collection server, or directly to the data collection server;

  Without operator's workplace: alarming signals are sent directly to the data collection server.

Storage Server stores information from the Central Information Collection Server for a long-lasting period of time.

Providing Information Server helps to decrease load of the Central Information Collection Server and to increase general fault tolerance of the whole system. It provides information for operator workplaces.

Monitoring Server is the work place of system administrator. It allows monitoring system work, changing oparational wanted databases and sending this changes to Information Collection Servers.

Operator workplaces. All client applications can be connected either to Information Collection Servers and Recognition Servers. This feature allows local and central alarm processing. Control access settings give an opportunity to devide access to appropriate post and camera for each operator.