

Zaporizhzhia Situation Center



Country: Ukraine

City: Zaporizhzhia

Areas: Government,
City Safety,
Police, Violations, Monitoring
Rooms

The Zaporizhzhia Situation Center is a control organization, where online monitoring of the situation in the city is carried out using a video surveillance system. Center employees monitor the places of the greatest concentration of people, and objects requiring increased attention from the public safety aspect. Recently, Zaporizhzhia residents had the opportunity to report violations occur in the city to the Situation Center workers. Zaporizhzhia residents can apply for violations of city landscaping, thefts, and also administrative violations.

Customer Pain Points:

- No object detection system.
- Difficulty of tracking the presence of objects.
- No tracking of parking violations around the city or town.
- Absence of roads violations fixation
- Absence of reports as such like vehicle data
- No VMS System installed

Our Solution – VEZHA Object Detection

The Object Detection module was chosen and improves the following to update the work quality :

- Many criminal vehicles and parking violations through the city were captured and detected .
- Many objects like cars, people and animals were determined in the city.
- Event’s analysis helps to find violators and prevent crimes.
- The Situation Center is able now to generate statistical reports using object detection to simplify the control of parking violations.

Hardware Requirements:

In way to organize the hardware for different analytics, 1 server was assembled with the following characteristics for analytics and virtual machine:

Middleware	CPU	Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz
Middleware core	RAM	16 GB
Database	Operating system	Ubuntu 18.04.3 LTS (Bionic Beaver)
MQ Server		

2 analytical servers with the following characteristics:

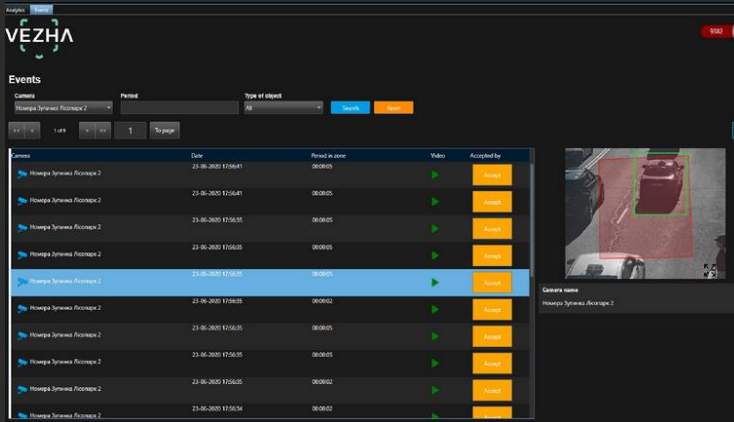
CPU	Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz (2)
RAM	126 GB
GPU	nVidia RTX 2080 ti 11GB
Operating system	Ubuntu 18.04.3 LTS (Bionic Beaver)

And one more server for storage: based on Dell EMC PowerScale.

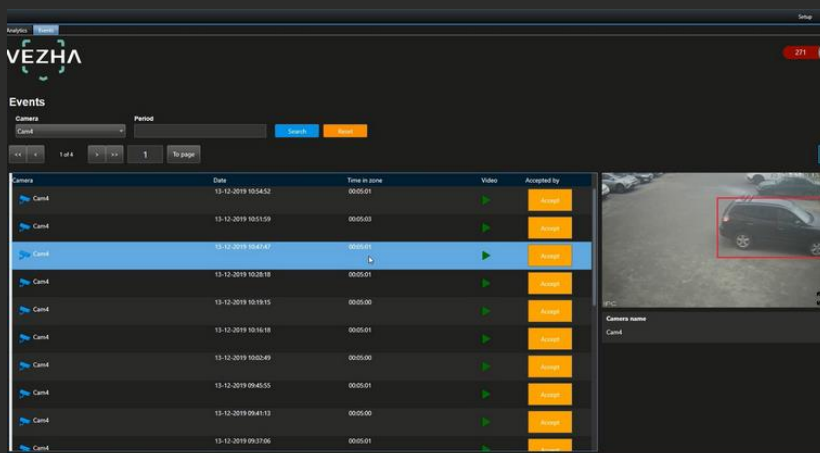
User Rights

Since the situation center is a large structure, where each employee has access only to his own data and modules, the VEZHA system provides many roles for different employees. These are administrator, inspector, manager, user, view analytics roles. Each role is a set of access rights enabled for a specific user.

Milestone Integrations



- Incoresoft VEZHA works in security systems of safe and smart cities with a lot of parking lots and places where violations can be fixed.
- Using the Milestone Integration and Object Detection Plugin all staff of the situational center can use the solution as VMS, also detect different types of objects: vehicles, people, animals.
- When the event is received the violation can be fixed by the employee of situational center.
- Using VMS, the staff can find not only the photo, time, and place where the car is fixed at the time of violation, but also give an example of video at the same. Milestone XProtect, VEZHA Object Detection Plugin for Milestone XProtect and directly added video streams are installed on every computer.
- The plugin has a direct connection with the server, updates are made weekly thanks to the VEZHA specialists, which allows to always have a new updated version of the software.



Our Solution Advantages

- Create your own rules for any situation (presence or absence) of the object by period intervals and the selected area
- Tracking and classification of over 50 objects. Previous analytics classified objects only when they were moving, now objects are additionally classified if they remain stationary.
- Unlimited zones with different rules
- Expanded Object Classification: Our video analytics go beyond people and vehicles to include cars, trucks, buses, motorcycles, and bicycles.
- Simple integration without any special settings
- Intelligent analysis of events and the ability to track vehicles
- Full team support

Conclusion

Incoresoft has implemented an efficient search system for wanted cars in a way to prevent crimes and parking violations

According to the National Police of Ukraine, for the first half of 2019, the use of the Object Detection module helped solve over 800 parking violations and crimes in a city with a population of 740,000 inhabitants. At the moment, we are talking about expanding the number of licenses for the entire city.

