



Croix Rousse tunnel

Counting pedestrians and cyclists

➤ **Analysis module:**
FoxVigi, counting.

➤ **Customer:** Grand Lyon

➤ **Site:** Croix Rousse tunnel, Lyon-France

➤ **Sector:** Transports

➤ **Aim:** To measure the number of pedestrians and cyclists using the tunnel.

➤ **Key figures:**

- 2013 : Inauguration of the tunnel dedicated to pedestrians/ cyclists/ buses
- Length of the tunnel: 1 763 m. The largest tunnel in Europe dedicated to pedestrians/cyclists/buses, diameter of 10m.
- 3000 pedestrians and 3000 cyclists every weekend.
- 4 cameras at the entrance/exit (2 for counting pedestrians, 2 for cyclists)

■ ■ ■ The request

Dedicated to public transports and to pedestrians/ cyclists, the new tunnel of La Croix Rousse is one of the most original artery of the city of Lyon.

The tunnel's width is 10 meters and it is parallel to the existing tunnel used by car drivers. The tunnel is divided into 3 lanes for each category of users: buses, cyclists and pedestrians. In order to reduce the anxiety that could occur when crossing a tunnel of that length, designers have been working on lights and music inside the tunnel. Indeed, the layout of the infrastructure ensures the well being and the security of pedestrians and cyclists.

As the tunnel is new, the customer wanted to find an effective and easy to integrate way to estimate the rate of frequentation of the tunnel.

■ ■ ■ The solution

Foxstream counting solution by video analysis has been chosen for its high performances even in particular cases (especially outdoor environments) and its easiness of integration within the existing global system of supervision of the site.

The reliability rate is superior to 95%, Foxstream counting solution can adapt easily to constraints linked to the crossing of pedestrians and cyclists (different speed of crossing). 2 cameras installed at each entrance/exit on each line cover all the movements.

In order to permit the surveillance of the site, the information/ data recorded by the system is given in real time to the operating head-quarter of the tunnel.

The administrators and the supervisors of the site can indeed know at any time, the number of people inside the tunnel.

■ ■ ■ Conclusion

Foxstream solution, based on network cameras and the real time video content analysis, allows to count easily and effectively the number of pedestrians and cyclists who used the tunnel. On weekends, an average of 3 000 pedestrians and 3 000 cyclists have been measured.

Its easiness of configuration and integration have seduced Mr Eric Toffin, director of Citylog: "Citilog is satisfied with the easiness of integration of Foxstream counting within the Citilog system. The result and the performance of the system comply with our requirements".

The solution answers perfectly the need to measure the number of users of the new tunnel and to secure the area. Since its installation, the system gives entire satisfaction to the final customer, the Grand Lyon.

Counting of pedestrians



Counting of cyclists



■ ■ ■ Foxstream

Foxstream is a French innovative editing software company, founded in 2004, specialised in real-time VCA (Video Content Analysis).

Foxstream's software solutions have been developed focusing mainly on security, our clients' primary needs being outdoor intrusion detection. Our goal is to provide optimal detection, with accurate & real-time information, by deleting the risk of false alarms. Our solution can also integrate and provide more dedicated applications in order to address the wide range of our clients' needs such as people detection, counting tools, crowd management, abandoned objects' detection, car park regulation...

We are proud to count already several thousand of sites secured by Foxstream's software solutions.

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Citilog

Citilog is a leading provider of advanced video-based monitoring and surveillance products that enable traffic management operators to identify incidents in real time. The company's products are ideal for industries such as traffic, transportation, security and safety management. Citilog's products are used at some of the world's most famous bridges, roadways and tunnels.



GTIE Transport

Subsidiary of VINCI Energies, GTIE Transport is specialised in conception, construction and maintenance of transport systems : motorways, tunnels, public transports etc.



Grand Lyon

Urban community formed by 59 cities of the conglomeration of Lyon in France.

Its president is the mayor of the city of Lyon, Mr Gérard Collomb.

