SOLUTION SHEET

TEIN TELECOM

“Video-based” Traffic Solutions

Involving...

- Traffic Solutions
- Video Technologies
- Video Content Analysis (VCA)
- Management System

The Solution

The association of various “video-based” technologies and the consolidation of captured data into one common information system are providing an attractive alternative to traditional in-road sensors.

Tein Telecom “video-based” traffic security systems are using standard cameras and other hardware wherever possible, increasing the economy of scale that comes from multiple use of resources. They are also far less disruptive to install and maintain, costing less than traditional sensors.

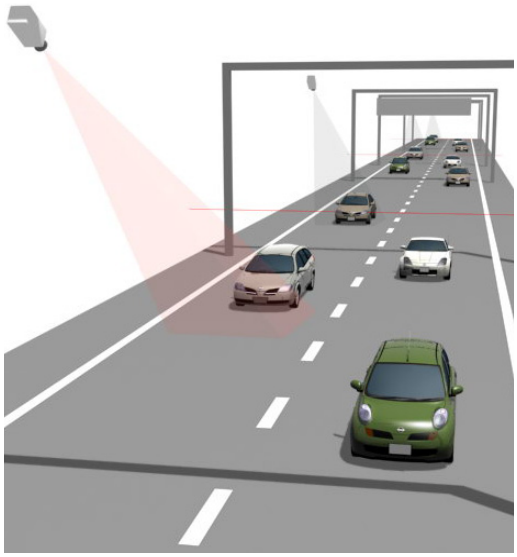
Introduction

Traffic security systems have traditionally based their technological infrastructure on various isolated technologies like analog devices, in-road sensors, analog CCTV monitoring systems and point-to-point links, providing difficult-to-scale and quite expensive systems. The main goal of a traffic monitoring system is to capture, translate, send, consolidate and distribute traffic information between various roads and tunnels and a management centre where it is processed by different services.

Together with the proliferation of “video-based” sensors, **advanced digital video surveillance** is gaining more and more importance in traffic applications. From video surveillance systems that can monitor individuals at airports, stations, concerts, and densely populated urban areas in general, to **video content analysis** assisting operators monitoring multiple cameras, automated **“video-based” traffic security systems** are the tools required for processing and consolidating these continuous streams of traffic data.

Open solutions and integration

The current digitalization process of video sources has led vendors to present proprietary hardware and software solutions resulting in a strong dependency from their customers. The existence of open standards for video encoding and protocols for streaming video information over IP networks has led to new integration possibilities. Leveraging it’s competence in the video surveillance and multimedia integration, **Tein Telecom** proposes solutions using a visual analysis of traffic parameters coming from various “video-based” sensors. This is a suitable solution in terms of scalability, cost, interoperability and performance for traffic control systems. Furthermore, its architecture can be easily adapted to integrate with other applications and tools like command and control, video surveillance or advanced security systems.



Functionalities

Major efforts have recently been concentrated on integrating various technologies and associating the collected data, delivering valuable complementary traffic information.

In this context, a number of very interesting “video-based “ technologies are consolidated to provide valuable information to the operator :

- Automatic Number Plate Recognition (ANPR)
- Dangerous goods (UN detection)
- Optical Signature recognition
- IR/Laser measurement systems
- Speed calculation
- Traffic Classification

Solutions for Mission Critical Environments

Overlay Management System

The multiplication of various traffic information systems and the need to consolidate captured data into one common system highlights the need to provide operators with a tool to help them with the daily operational traffic management.
The integration and scripting capabilities of the Tein Telecom **SightVision**™ application suite provides operators the right information at the right time.

ANPR

Automatic Number Plate Recognition (ANPR) is a camera-based system used to automate the identification of vehicle number plates. There is an increasing need to identify vehicles and track their location for a wide number of applications. **Customized integration** with other security or control systems like CCTV management or traffic control systems enhances the ANPR value by putting crime information immediately at the fingertips of operators and police officers.

Journey Time

Calculation of journey time is part of **Tein Telecom**'s Traffic solutions. This involves the linking of cameras for number plate recognition with a group of algorithms which make it possible to predict the journey time by car on one or several sections of a given route. It can be used by local authorities to provide dynamic information signs or website messages which inform vehicle drivers of the expected time of a given journey. These solutions can also enable a better management of road equipment (tunnel exhausters, traffic lights, etc...).

Dangerous Goods

Real-time detection of the danger level and of the type of product transported by trucks with tanks, and other vehicles transporting dangerous goods is a very important traffic security application. By linking this functionality with number plate recognition, the truck can be identified and tracked.
This solution is a way of increasing the security in tunnels because should an accident occur, it can be indicated whether or not there are trucks present in the tunnel at a given moment, as well as the contents of their load.
The solution is also a means of ensuring that labels on vehicles transporting dangerous goods in certain areas are respected, or that the alarm is raised if a truck transporting dangerous material enters a sensitive area (near embassy, nuclear site, etc...).

And more...

- Access Control
- Traffic classification (make, model...)
- Speed calculation
- Car Parks access
- Unauthorized use of bus lanes
- Detection of stolen trailers

About Tein Telecom

Tein Telecom is a Belgian privately owned company which was founded in 1913. Over the past decades, the company has always been looking for specific niche markets where it could develop its strengths (flexibility, quality, technology driven) in order to become market leader in some specific fields.
Today, Tein Telecom acts as a leading architect and supplier of innovative and integrated network-based Voice, Data and Video solutions. With a technical staff of 85 people, the company has reached a high level of expertise in multimedia integration.
Multiple successes within complex projects involving advanced and customized applications did help the company to invest in people and technologies. Following a strong R&D investment strategy, Tein Telecom has developed a unique application package offering highly intuitive management of an entire surveillance infrastructure : **SightVision**™
Listening to his customers, the company did recently leverage his broad knowledge and expertise in order to propose customized solutions in the area of **Intelligent Traffic Systems**.

Solutions
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