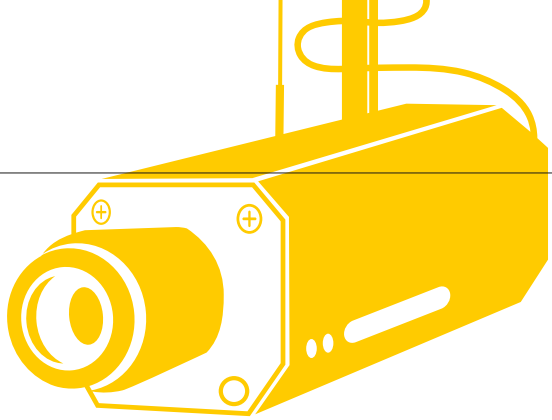

ALL EYES ON SCANDINAVIA

Scandinavian Video Detection Projects Awarded to Traficon!

BASED ON A TRUE STORY

No More Traffic in Oslo City Center!

OSLO (NORWAY) - The Norwegian Public Roads Administration (NPRA) is building the Bjørvika tunnel in the centre of Oslo. A real piece of Norwegian art!

Key to the realization of this prestigious project is re-routing the E18 motorway through a tunnel beneath Oslo Fjord. The motorway currently acts as a barrier separating the harbor areas from the city. The new tunnel will move approximately 100,000 vehicles a day underground – releasing the quays and previously trafficked areas to recreational, residential and commercial development, while reducing both noise and air pollution.

A perfect challenge for Traficon's VIP-T incident detection modules

Rather than being dug into the sediment under the fjord, the tunnel rests on the sea bed and relies on gravity and water pressure to keep its elements in place. To meet this project's extremely high safety requirements, the tunnel is equipped with field-proven surveillance and fire detection systems. The goal is to reduce accidents by 50% via this new passage compared to existing surface roads of the same standard.

This tunnel, with two 3-lane tunnel tubes, will be 1100 meters long, of which 675 meters will be under water: the various elements are to be constructed on land, floated into position, and finally lowered onto the seabed – a unique construction procedure in Norway.

When the Bjørvika tunnel is completed in 2010, it will link the Festning tunnel in the west with Ekeberg tunnel in the east for an unbroken total length of 6 kilometers.

PARTNER IN THE SPOTLIGHT

Name:
Jan Olav Larssen

Company:
Aventi

Function:
Project Manager

"It means a lot to us to know that we're always backed up by highly skilled professionals in Belgium."

Jan Olav Larssen tells why Traficon has been selected for various Norwegian video detection projects in the past – and now again for the Bjørvika tunnel project :

"Here in Aventi, we have had an excellent impression of Traficon – from the very first e-mail we sent them, to our current count of over 500 VIP-T modules deployed. Traficon was a natural partner for us in such large and strategically important projects as the Festning and Bjørvika tunnels. These tunnels will change central Oslo radically, and we wanted to be sure to have a very reliable and professional partner, since the project is receiving a great deal of attention from both media and government. The focus on security in these tunnels is very high, and they will virtually be the aorta of Oslo's traffic system, as well as the first sub-sea sunk tunnel in Norway. It means a lot to us to know that we're always backed up by highly skilled professionals in Belgium, and that we can always count on them to do their job as we do ours. Our experience has been that Traficon always delivers: both when it comes to equipment and quality, and support thereafter."

→ www.vegvesen.no/Vegprosjekter/Bjorvika

Counting Down to Zero

One phrase springs to mind when considering the location of this year's ITS World Congress: Vision Zero. The concept, devised by the Swedish Road Administration's Claes Tingvall, has been gathering momentum both in its home country (where the government has made it policy that road deaths and injuries be reduced to zero by 2020) and also further afield.

Traficon has been fortunate to observe the impressive efforts in Sweden, having a number of high-profile projects in the Scandinavian region as a whole. The ethical tenet at the heart of Vision Zero – that road fatalities and serious injuries must not be tolerated – is in complete harmony with the philosophy that Traficon was founded on: to create safer roads and smoother traffic.

Vision Zero's vision of safety

The Vision Zero principle contains four key elements to make the concept a reality: safe speed, safe vehicles, safe infrastructure and safe drivers. Safe speed relies on better enforcement of speed limits – something that more countries are beginning to take seriously, but where a great deal of work is still needed. And while auto-makers such as Volvo are exemplary in their efforts to build safer cars, the ultimate in safe vehicles will not be achieved until the fruits of the various vehicle-to-vehicle and vehicle-to-infrastructure projects are rolled out. The final two elements are closely linked. While creating safe drivers means educating coming generations of road users on how to make smart decisions, it also means allowing for human error and creating an infrastructure designed to account for this.

A safe infrastructure is an intelligent one. This means that road operators need to know what's happening on their networks – and they need to know in real time. In the future, getting that information out to all vehicles on the road will also be a priority. For now, though, delivering accurate data on what's happening, and where, is the key to a safe infrastructure.

Beyond detection

Time and time again, video detection proves invaluable in providing high-quality, timely information on the status of roads, enabling authorities to improve their safety records. If a stopped vehicle or a spilled load (pretty innocuous incidents by themselves) is not detected for some time, these initial incidents can set off an avalanche of catastrophic events. Fast and reliable video detection can stop secondary events and can save lives; going beyond detection to actually prevent accidents.

Video detection is also a global solution: it can be applied to aging infrastructures and brand new roads alike; which links to another facet of Vision Zero. The vision itself is not just about improving road safety in wealthy European countries; it is about respecting the right to a safe journey for all road users. More than 90% of all road deaths occur in developing countries. In a recent interview, Claes Tingvall himself called for developing countries to take priority on the global stage: "All companies involved in traffic and all companies using the network in those countries have a major obligation to act in the same way as they would in their own countries."

The responsibility to achieve Vision Zero lies in all of our hands.

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DIRECTED BY TRAFICON

THE INSIDER

THE LATEST NEWS FROM THE WORLD OF TRAFFIC VIDEO DETECTION

SCANDINAVIAN SPECIAL

ISSUE 15, SEPTEMBER 2009

WWW.TRAFICON.COM

EDITORIAL

Future Focus

I've been in the road traffic industry for 25 years – and a motorist in road traffic for even longer – and I've seen many improvements in road safety and mobility in general. The implementation of intelligent technology will soon take this evolution even further. Let me tell you more about the future role of video detection here.

Automatic Incident Prevention

Traficon started by gathering data (e.g., speed, flow and occupancy) and then moved into automatic incident detection (where we detect stopped cars, wrong-way drivers, and more). I believe the next generation of products will be more geared towards automatic incident prevention. We won't drop data and detection – roads will always need to be monitored for safety – but we'll move toward helping drivers avoid danger. It's all about providing road users with useful, timely information of what's ahead. When you alert a truck driver to slow down because traffic is queuing immediately in front of him, you can prevent him from plowing into the queue, and you save lives. It's that simple.

Intelligent Communication

The work Traficon now does is to analyze traffic based on video images. The data we collect is used to help traffic managers; to provide them with more information on what's happening on their roads. It's up to them to make sure road users can access it. The next important step forward in road safety is to get that information directly to the road user – what we call infrastructure to vehicle communication.

I'm sure Traficon will play a pioneering role in this evolution but will we ever be able to prevent all accidents? Well, if a meteor were to fall on your car, you'd have an accident! But the crucial thing is to keep aiming for that absolute minimum. And that's exactly what Traficon will continue to do!

— Jo Versavel, Managing Director

TRAFICON
TRAFFIC VIDEO DETECTION

COVER STORY

Zero Tolerance for Serious Injuries or Deaths on the Road

'Vision Zero' – whereby eventually no one will be killed or seriously injured within the road transport system – is a Swedish philosophy towards road safety. The goal is zero deaths by 2020. Is this achievable? As Traficon believes its technology contributes to safer roads, we feel it as our duty to tell you about this ambitious philosophy.

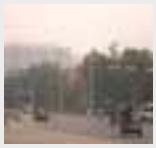
Plus, because this year's ITS World Congress is being held in Sweden, we're adding a special two-page bonus on video detection that's (nearly) operational in Sweden and the rest of Scandinavia. In addition to prestigious projects – like the Bjørvika tunnel – that are underway right now, we're bringing a couple of previous projects back into the spotlight: after a couple of years in operation, does the video detection system still meet all performance requirements and customer expectations?

Next to the 'Scandinavian touch', this newsletter also highlights how video detection technology is being implemented from the USA to France as an indispensable tool for active and intelligent traffic management.

No matter where in the world they are, all of these video detection projects have one thing in common: they've been implemented by people who believe that Traficon technology will help achieve 'Vision Zero'!

SNAP SHOTS
NEWS FROM AROUND THE GLOBE

Traficon has installed 9 VIP-T modules for automatic incident detection inside the **Cap-la-Houssaye tunnel** on Réunion island (located in the Indian Ocean, east of Madagascar). This tunnel is part of the 'Route des Tamarins' project to improve access to the west of the island and to provide better traffic conditions for tourists visiting this fantastic small paradise. ✷ A new partnership agreement – officially signed at Traffex (in Birmingham, UK) at the end of April 2009 – is now in effect. **Telent** is now the official UK distributor for Traficon's TrafiCam vehicle presence sensor. Several sites across the UK are already in operation. ✷ **TrafiCam Collect-R** has been installed in Italy for queue detection on a completely stand-alone, solar-powered basis. By quickly informing road users, queue-tail accidents are prevented. ✷ As the result of a fruitful development collaboration with **Optelecom-NKF**, the first IP-based Automatic Incident Detection System is now a fact. The system provides traffic authorities moving towards IP solutions with a sophisticated instrument to improve traffic flows and safety. ✷ Siemens employs TrafiCam sensors for urban traffic control in **Nanjing city**. More and more, Chinese traffic managers are discovering the benefits of this above-ground sensor.



APPEARANCES
FAIRS & EXHIBITIONS WORLDWIDE

- **October 2009, 27-30**
  Trafic (Madrid, Spain)
  Stand 7G22
- **November 2009, 17-19**
  TranspoQuip (São Paulo, Brasil)
  Stand 1536
- **December 2009, 6-8**
  Gulf Traffic (Dubai, U.A.E.)
  Stand 3H01
- **Febuary 2010, 3-4**
  Atexpo (Paris, France)
  Stand TBD
- **March 2010, 23-26**
  Intertraffic Amsterdam
  (Amsterdam, The Netherlands)
  Stand 10.407

BASED ON A TRUE STORY

Arriving for Your Plane on Time ... without Incident!

SEATTLE-TACOMA (U.S.A.) - The Seattle-Tacoma International Airport in the USA recently selected Traficon products to deploy a state-of-the-art traffic data collection and incident management system. The Transpo Group, a Seattle-based Intelligent Transportation Systems (ITS) consulting firm, integrated Traficon hardware and software with other ITS applications to create an ITS system capable of automatically responding to a predefined set of conditions or incidents.

The video detection system uses 14 Traficon VIP-T boards to collect traffic data for three lanes and monitor traffic incidents (such as stopped vehicles or wrong-way drivers) on the travel ways and shoulders. The VIP-T boards interface with Traficon's T-Control central software, which provides all data management and reporting functions. The ITS application user interface deployed at the airport includes a map of all ITS device locations as well as their current status.

Real-time travel information

In addition to collecting data and detecting incidents, the system also has the ability to alert users of travel conditions by posting automated messages on variable message signs and sending alerts or alarms to specific airport managers and users. Depending on the level of congestion reported by the T-Control, the color of the roadway changes in real-time: green means little to no congestion, and black means stop-and-go traffic. Therefore, the interface map gives real-time travel information to the ITS application users.

Overall, the integration of ITS devices into one system provides the airport with the ability to monitor its roadway facilities and to trigger a sequence of actions based on the information from the Traficon VIP-T Boards. The system enables the airport to respond to incidents in a timely manner and to make real-time decisions regarding traffic management. The airport can also review a continual stream of traffic data over the long term to define future airport needs.

Airport ITS Management Application User Interface and a video image from an Airport Camera using VIP-T Board.

BASED ON A TRUE STORY

Passed with Flying Colors!

WUXI QINGQI (CHINA) - After an intensive period of fine-tuning and testing, the Qingqi road tunnel is now officially open to the public. Again was chosen to implement Traficon's video detection system. Why? Just look at the facts!

Traficon won a month-long comparison test, in which three international suppliers and one Chinese supplier participated. The VIP incident detection module's excellent performance convinced the end-user that Traficon was the right choice.

The Qingqi tunnel is a city tunnel that passes through Wuxi city (Jiangsu Province). This 1.9 km-long tunnel has three lanes per tube. Traficon's AID system was installed and connected to 56 cameras monitoring every section of the tunnel. The system focuses on detecting traffic incidents such as stopped vehicles, wrong-way drivers, smoke detection, 5 levels of service, pedestrian detection, etc.

Mr. Chen, tunnel operator, is pleased with the final results: "We already saw from the tests that Traficon's Automatic Incident Detection (AID) system could be of great help to us. Now, with the full installation, we are convinced we have a powerful tool helping us keep an eye on the traffic situation within this tunnel."

Monitoring 56 cameras at the Traffic Control Center.

BASED ON A TRUE STORY

Traficon's AID System Watching 22 Tunnels in Paris

PARIS (FRANCE) - Traficon is very pleased to be awarded a contract with the Direction Inter-Départementale des Routes d'Ile-de-France (DIRIF) for implementing its Automatic Incident Detection (AID) solution in 22 tunnels in the Regional Paris area.

Officially launched by the DIRIF in September 2008, this is the largest tunnel surveillance project of its kind ever implemented in the world. Over the next three years, 1400 cameras linked to Traficon's AID system will be installed to intensively monitor traffic flowing through the tunnels.

"The strength of this camera-based intelligent technology is its unique fast detection rate in combination with the direct visual feedback," explains Steve Collins, Director of Traficon France. "Thanks to this intelligent surveillance system, the operator is instantly warned about any 'abnormal traffic behavior' inside the tunnel. The operator can then quickly take all necessary actions to prevent an accident from escalating into a major tragedy."

1400 AID cameras to be installed in Paris.

"We're all working hard to make the Regional Paris tunnels the safest in the world!"

Today strict French regulations demand that tunnel safety is brought to the highest available security standards. Every tunnel longer than 300 meters is required to be equipped with an AID system to be able to detect all major incidents within seconds. This includes events such as stopped vehicles, smoke, traffic congestion, wrong-way drivers, pedestrians and fallen objects.

"We know the whole world will be watching the final outcome of this large and essential tunnel reference project. So we're all working hard to make the Regional Paris tunnels the safest in the world! With more than 700 VIP-T incident detection boards already installed in 32 tunnels throughout France, this field-proven module will definitely be able to deliver the required high-level detection performance.", Steve Collins says.

PRODUCT SPOTLIGHT

Extremely "x-stream" in Bergisch Gladbach

When TrafiCam x-stream became commercially available, Bergisch Gladbach stepped forward to be the first city to use this new solution to manage their traffic lights better and more dynamically. 109 wide angle sensors over 35 intersections are being installed throughout this German city for stop bar vehicle presence detection. The installation and configuration phase started in May and is currently in "full progress"!

Christian Grunwald of the PVT Planungsbüro für Verkehrstechnik Essen GmbH, who serves as a consultant looking after this city's interests, explains why they chose this MPEG-4 streaming video sensor:

"A combination of factors convinced us to choose this type of sensor. First of all, its life expectancy is much longer compared to inductive loops. Also, we've seen that bad road conditions do not affect its detection quality and performance.

TrafiCam x-stream operational in Bergisch Gladbach.

And last but not least, with TrafiCam x-stream you can configure up to 16 multiple virtual loops, providing data on the exact number of cars waiting at an intersection. Our customer for this project specifically asked for this capability."

These numerous benefits have convinced both customer and consultant that TrafiCam x-stream is a cost-effective product, beneficial to all Bergisch Gladbach road users.

BEHIND THE SCENES

Mens Sana in Corpore Sano

About two years ago, Traficon started up its own cycling team to help everyone stay fit. So far, we have not (yet) discovered an extraordinary cyclist talent within our team who could win the next Tour de France. But that's not our aim. We simply believe that, by keeping our minds fit, we can continue to come up with innovative and quality products. Our goal? Working hard to be the 'Eddie Merckx' of traffic video detection!

Tim Landuyt, R&D engineer and founder of Traficon's Cycling Team.

BEHIND THE SCENES

Say Cheese to the 'cowmera'!

Cow Detection! Traficon's newest detection feature? No, not yet – but it might become an additional feature soon, if the Sharp tunnel in Turkey is the shape of things to come.

A couple of months ago, two cows spontaneously wandered in to inspect the tunnel activities. They apparently felt quite at ease (and safe!) inside the tunnel – so let's hope they don't see this as the perfect shelter in bad weather. Stopped vehicle, wrong-way driver, a cow... Traffic is moooving slowly. Operators and Traficon developers: be forewarned!

Cow inspection in the Sharp tunnel (Turkey).

BASED ON A TRUE STORY

"Yes, We're Still Satisfied!"

GÖTEBORG (SWEDEN) - In 2005/2006, an intelligent detection system was installed in Sweden's Göta Tunnel (1.6 km). The work was executed by ISG, a Swedish system integrator. We're always keen to hear how things are going with previous Traficon projects – so we asked Mikael Persson, Project Manager at ISG, to give us an update.

"I remember one extremely crucial task in this project was to convince the customer that a camera-based monitoring system – when implemented with the right knowledge and the right technology – would definitely fulfill his requirements. You must understand that, in the years before the Göta Tunnel project, the customer had had a series of detection system failures: so they didn't believe that camera-based AID would work. Eventually, we were able to convince them that, instead of an in-ground magnetic loop or radar-based solution, a video detection system from Traficon would be the best option for securing the tunnel.

Mikael Persson, ISG Project Manager

Then, before opening the tunnel, the system was put to the test. And what a test it was! The customer really wanted to see what this system was capable of – and so they created one of the most complex test protocols we've ever seen. To test all of the camera detectors in all lanes and in all possible situations, the test car had to drive into the tunnel, then stop in all possible situations and locations, and then drive back and start all over again. We made 15-20 stop tests, plus queue and wrong-way driver, for each camera – over 1000 stop detection tests in all.

Now the most interesting part: our detection performance during the tests was 100% correct! Proof that Traficon's camera-based detection system really covers every square meter in the tunnel! Of course, this test result was more convincing than any argument we could offer. Four years after the installation, we know the customer is still satisfied and the system still meets his requirements. In fact, he's even converted other tunnels to Traficon systems. He's become a true believer in the benefits of AID technology!"

2003 Isokyla Tunnel Helsinki Finland

2005 Orkdalsvegen Tunnel Norway

2007 E18 Frodeas Tunnel Norway

2009 Steinberg Tunnel Norway

REWIND

BASED ON A TRUE STORY

Automatic Incident Detection for Europe's Longest Bridge

ÖRESUND (DENMARK/ SWEDEN) - The Öresund Bridge is a combined road-rail bridge-tunnel across the Öresund strait. With a total length of 7.8 km (4.8 miles), it is the longest bridge of its kind in Europe. This project proved to be an adventurous video detection journey.

The bridge connects the two metropolitan areas of the Öresund Region – the Danish capital of Copenhagen and the Swedish city of Malmö. The E20 international European highway runs across it and through the tunnel via the two-lane motorway, as does the Öresund Railway Line. This huge project was started in 1991, and the Öresund Bridge was officially opened on 1 July 2000. Today, video detection is still key to smooth-running traffic on the bridge.

Safety first

Ideal for travelers wanting a quick connection between Sweden and Denmark without flying, the Öresund Bridge now carries more than 60,000 travelers a day – visitors as well as local commuters. The bridge's four-lane road carries 6 million vehicles a year, and the two train tracks carry another 8 million people each year. Safety and protection was of utmost importance when designing and executing this project. As a result, both tunnel and bridge are equipped with state-of-the-art traffic management systems, such as Traficon's Automatic Incident Detection system (AID). Such video detection technology – which is now setting the standard in quick detection – is regarded as indispensable in monitoring and securing the entire stretch.

And ensured by back-up

What made this Öresund project really unique for Traficon? The request for a redundant video detection system: a system that is able to continue functioning normally in the event of a component failure (such as a power failure, network communication failure, and so on), by having back-up components that perform duplicate functions. Redundant components can include both hardware and software elements. The power of such a redundant system is that it prevents loss of important data, and operators know they can count on the system 24 hours a day, enabling them to remain in control. In the case of the Öresund Bridge, redundancy was implemented at camera level to be sure that – even in the event of camera failure – every incident is still detected.