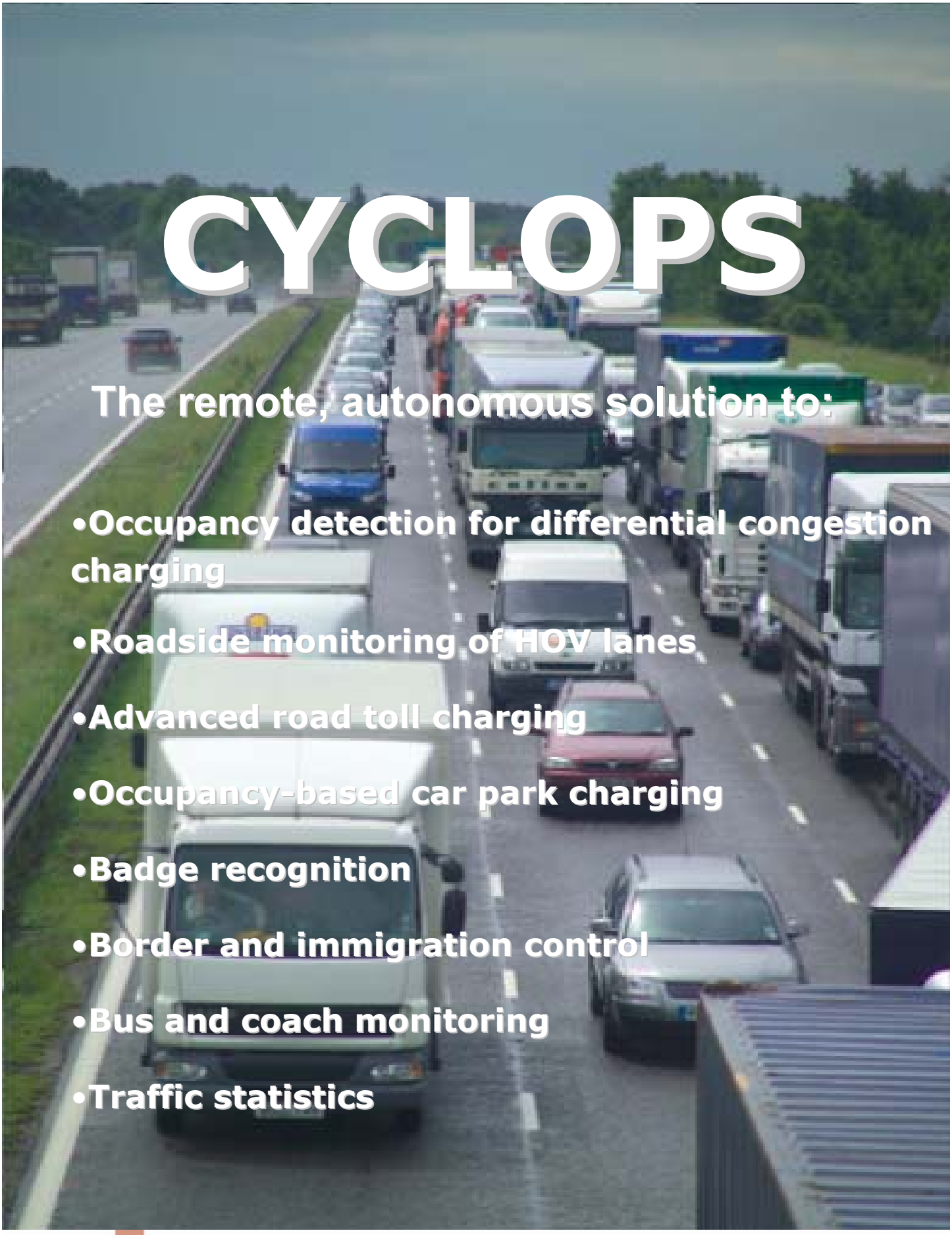

CYCLOPS

The remote, autonomous solution to:

- Occupancy detection for differential congestion charging
- Roadside monitoring of HOV lanes
- Advanced road toll charging
- Occupancy-based car park charging
- Badge recognition
- Border and immigration control
- Bus and coach monitoring
- Traffic statistics

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intelligent monitoring solutions

Automated vehicle occupancy monitoring is here

Automatic detection of vehicle occupancy has always been the missing link in traffic planning and enforcement.

High Occupancy Vehicle (HOV) lanes are common throughout America and Australia, yet monitoring relies on police or local authority enforcement. But manual monitoring has a typical accuracy rate of only 65%.

Our technology breakthrough enables for the first time an automatic, accurate way of counting vehicle occupants, day and night, in all weather and without driver distraction.

The VOM-10 Vehicle Occupancy Monitor is the low cost, automated user-friendly vehicle occupancy monitoring solution..

Vehicle Occupancy Ltd

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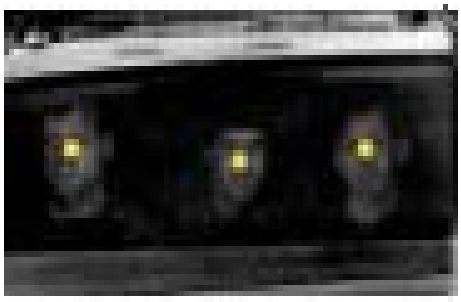
CYCLOPS

Active Image Detection

Traffic volume and its associated issues represent a global problem, affecting national infrastructures and the environment.

The CYCLOPS imaging system has been designed to address these issues and provide support in monitoring vehicle movement and use.



The combination of advanced optical engineering, matched with high-speed, custom image processing, provides an instrument capable of detecting a range of in-vehicle properties; from occupancy numbers, to identity/status discs and badges.

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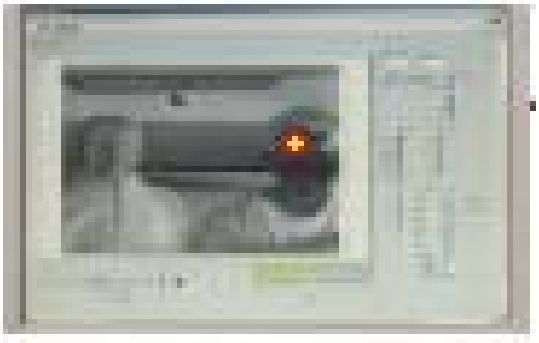
CYCLOPS

System Features

Minimal Installation Requirements

CYCLOPS has been designed with minimal installation requirements and needs only a suitable mounting (pole or gantry) and a 110/240v mains feed.

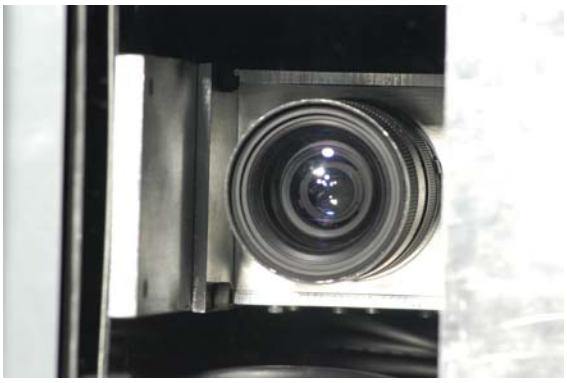


Remote Data Download

The images captured by CYCLOPS can be downloaded via the internet or GSM link. Similarly, each unit can be addressed and maintained from the same remote locations.

Compact Storage

Whilst accessible remotely, images are captured and stored locally. Each interchangeable module has its own secure internet ip address.



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CYCLOPS unit suspended from frame

High occupancy vehicle (HOV) lane monitoring

conventional camera fails to detect number of occupants

dual lighting illuminates whole lane without driver distraction

camera view detects vehicle anywhere within traffic lane

VOM-10 easily distinguishes human occupant (R) and decoy (L)

CAR 123

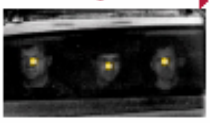
ANPR (automatic number plate recognition)

Images and number plate relayed to database

Database

Illegal HOV lane users traced by vehicle registration

context image verification



VOM-10 detects multiple occupants

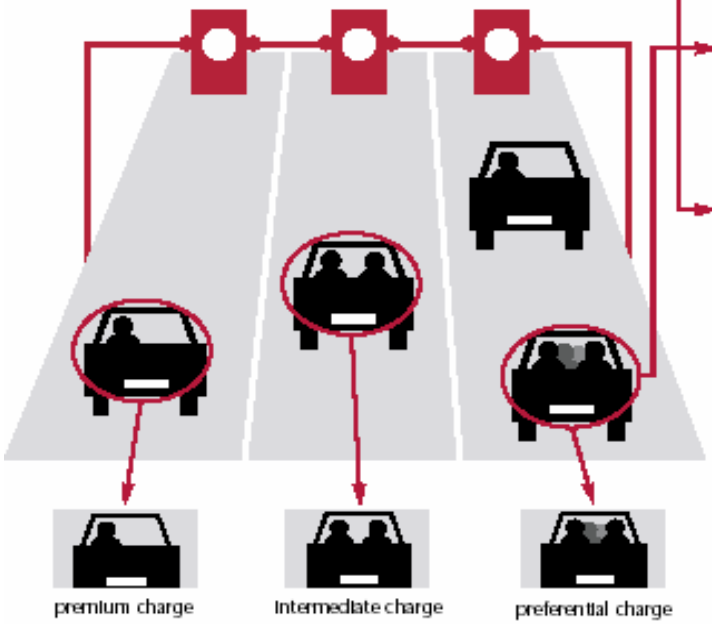
HOV lane used correctly

HOV lane enforcement benefits

- Congestion reduced
- Car sharing increased
- Bus services increased
- Accident casualties reduced

Vehicle occupancy analysis of all traffic

- real time, accurate audit
- gantry mounted cameras enable full road monitoring



VOM-10 detects multiple occupants

CAR 123

ANPR (automatic number plate recognition)

Images and number plate relayed to database

Database

appropriate charge is calculated and deducted from vehicle owner accounts

context image verification

premium charge

intermediate charge

preferential charge

Automatic detection of vehicle occupants for tolling

- Differential congestion charging
- Advanced toll charging
- Occupancy based car park charging

A simplified version can be used for counting

- Border and immigration control
- Bus and coach monitoring
- Traffic statistics

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CYCLOPS

Intelligent Monitoring

CYCLOPS has been designed to record the lowest possible numbers of false positives. Unique imaging technology ensures that CYCLOPS:

- targets only human skin
- is effective on all skin colours
- is *un*affected by facial hair, make-up, etc
- rejects decoys and dummies, as well as pets and luggage
- is unaffected by temperature
- counts full vehicle occupancy
- works on all current vehicles
- provides 24-hour, all-weather operation
- is passive (non-illuminating) for daytime use
- is active (non-distracting) for night-time use
- has a range of operation of up to 50 metres
- records images at up to 80 mph

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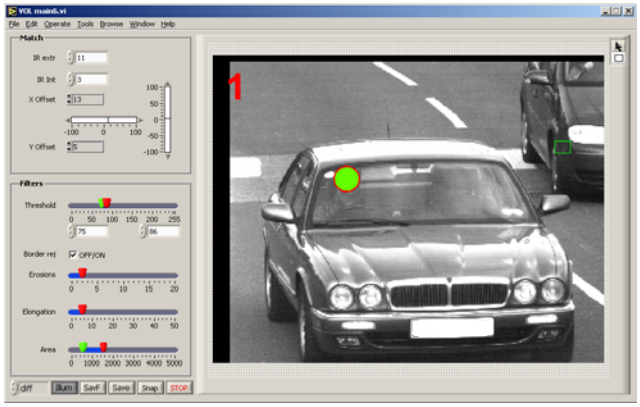
CYCLOPS

In The Field

The pioneering patented CYCLOPS technology has undergone 95% accurate trials on major UK trunk roads, including the UK's first HOV lane (A467, Leeds).

A unit has been installed at the main gates of Loughborough University, to identify counterfeit parking discs, increase security and monitor the flux of traffic onto and off of campus.



CYCLOPS monitoring traffic at Loughborough University.

Top to bottom: view of installation, local monitor showing 'live' result, processed data at base 1 km away.

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CYCLOPS

Contact Details

Please contact our office for further information on CYCLOPS. Details listed below.

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