



Automatic vehicle detection & classification technology

# Idris Incident Detection

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TS91 "Incident Detection for  
Road Traffic Management"

V1.1



# Incident Detection – the status quo

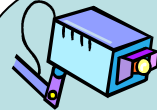
Tripodal Loops:

Improved

CV

High

No s



CCTV:

Computer-aided VID

Allows direct view from control centre

Subject to environment

(rain, snow, fog, sun)

Shadowing

Often criticised for high false alarms



Radar:

Detects SSV, congestion and debris

Shadowing

Mobile Phones:

Free!

drivers!

Slow

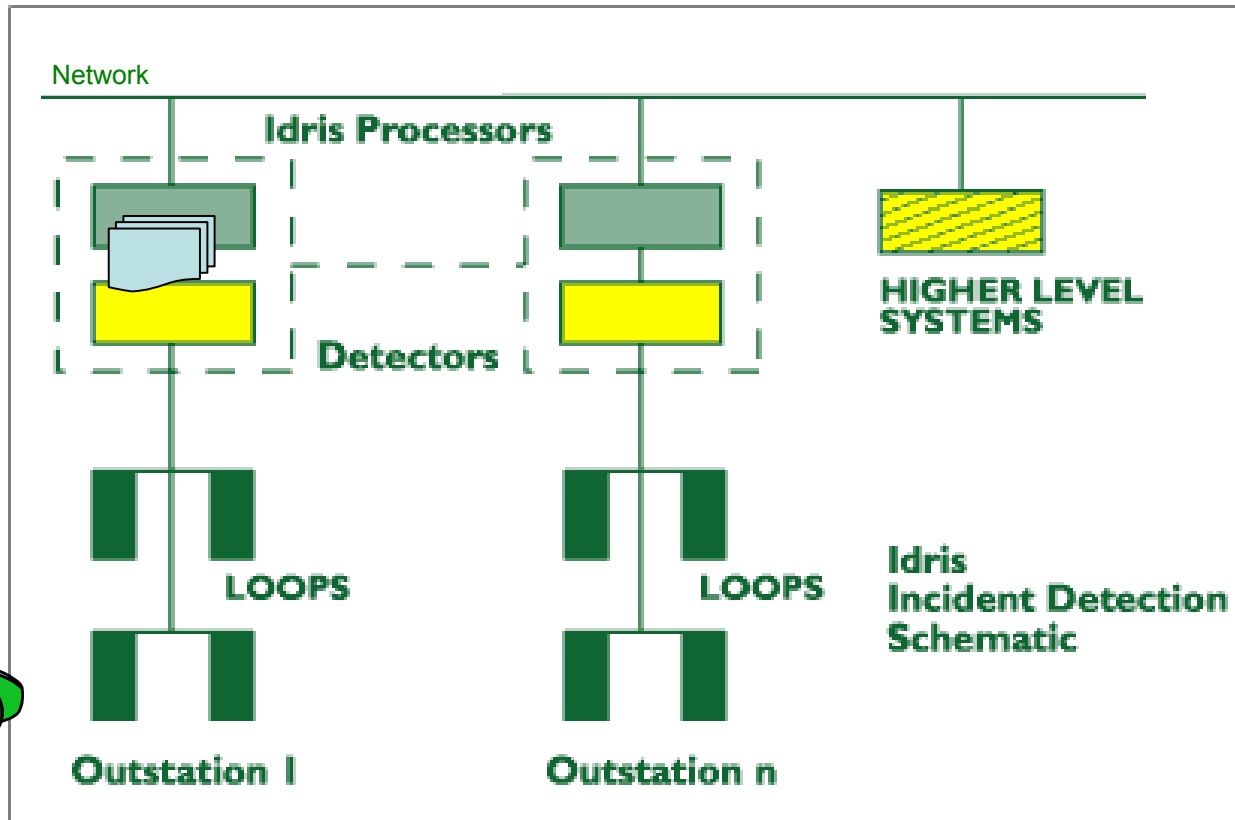
time

7/10 – Must try harder

# *Idris*

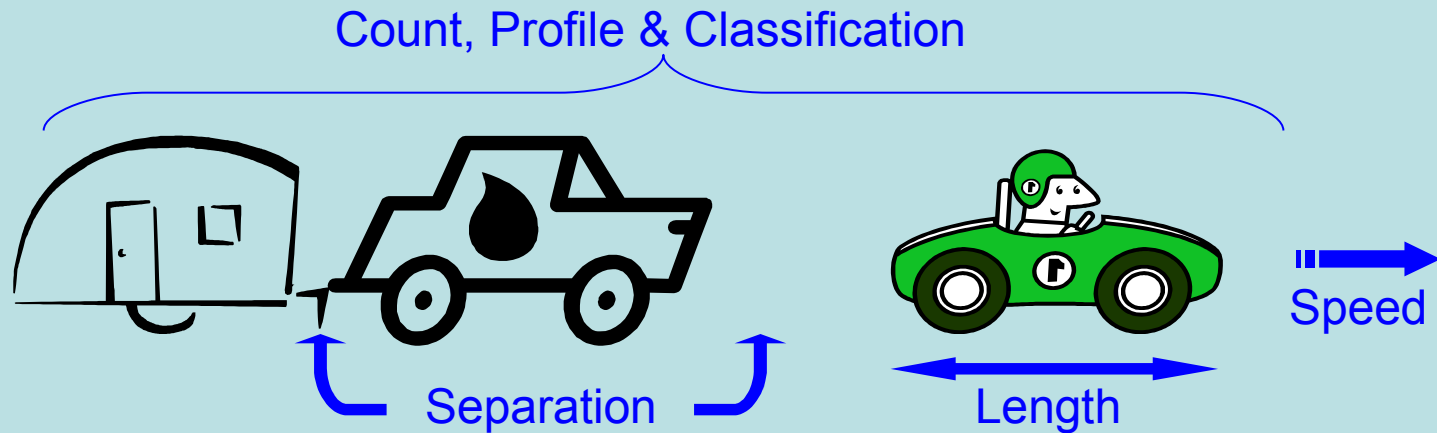
- Started as Incident Detection system, in UK, 1995
- Single sensor, multi-lane, loop-based vehicle detection
- Count accuracy improved 100-fold
  - ❖ >99.99% in free flow
- Has become the *de facto* standard in axle-based ORT
- Counts axles & classifies accurately in all conditions
- Low cost of ownership
  - ❖ High MTBF; long lifetime; no post or gantry issues
- Has won 2 Queens' Awards for Enterprise
  - ❖ Export 2006; Innovation 2008
- Now returning to improve Incident Detection

# How Idris Automatic Incident Detection (AID) works



# Features of Idris AID

Idris' proven vehicle detection algorithms:



+

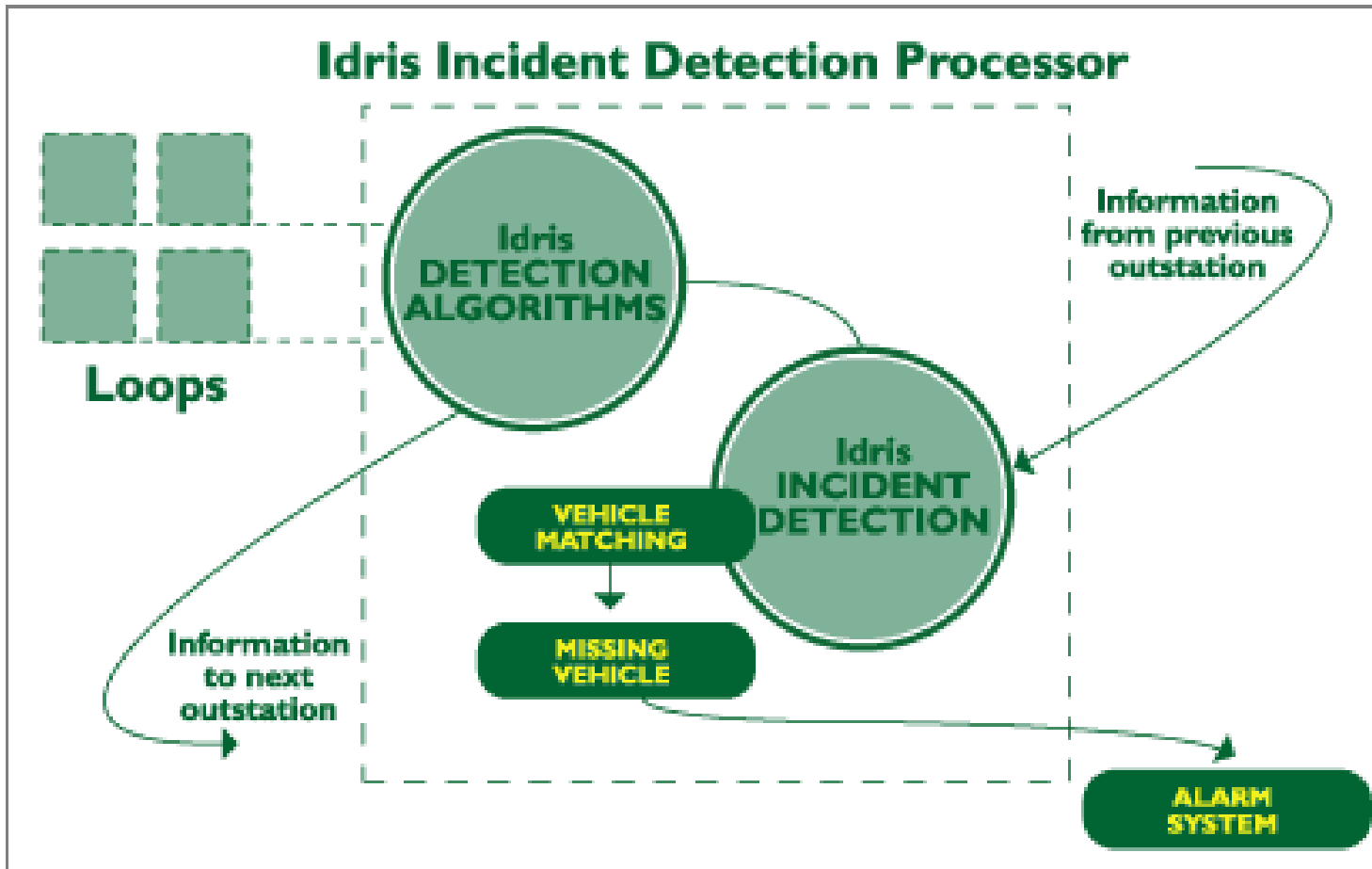
Incident Detection supervisor

= Prediction of arrival at next station & vehicle matching



Detection of SSV, or other significant event

# Software architecture



# Event alarms

Slow  
Traffic



Single Stopped  
Vehicle (SSV)

Queued  
Traffic



Parked Vehicle  
(Shoulder  
or ERA)



Slow  
Vehicle



Reversing  
Vehicle!



# Performance

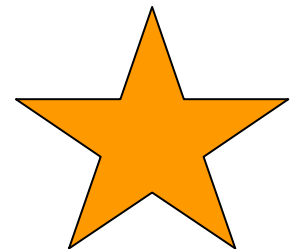
Length repeatability:  
Mean = 1cm  
Std Dev = 7cm

Speed accuracy:  
99%

Re-identification of vehicle  
at next outstation:  
>99.5% (flowing traffic)

SSV Detection works  
in flow rates up to  
2000 vehicles / hour / lane

Single Stopped Vehicles:  
Detection rate = >90%  
False Alarms = <10%



# ***And there's more.....***

- Traffic counts (Time, Lane, Exit)
- Traffic flows
- Average speed (Time, Lane)
- Traffic patterns
- Individual vehicle data

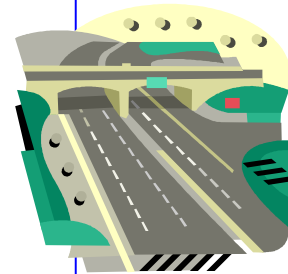


***.....for medium/long term planning***

# *Idris AID applications*

## Stand-alone

Rural highways and roads  
Semi-urban motorways

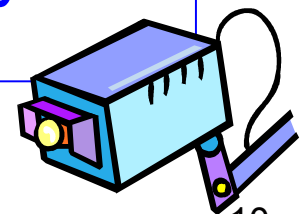


or..



## Linked to CCTV

Tunnels & Bridges  
Urban motorways



# *Idris AID*

Tracks vehicles, detects  
Day & Night, in any weather

Alerts control centre & CCTV  
Trigger lane management, VMS

Use it stand-alone or with computer-aided CCTV



*Incident Detection has been waiting for this*



Automatic vehicle detection & classification technology

Thank you!

[www.idris-technology.com](http://www.idris-technology.com)

