

Modern AGD Radar Use and Applications

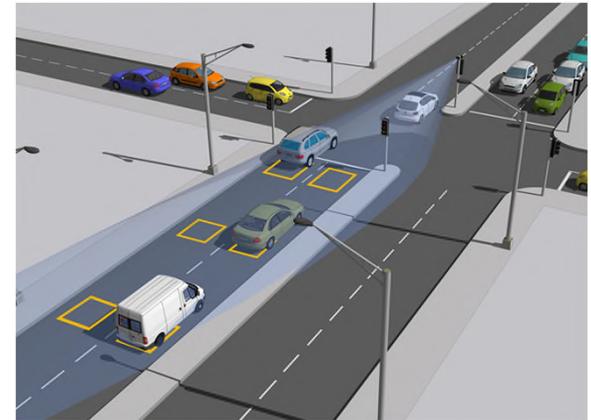
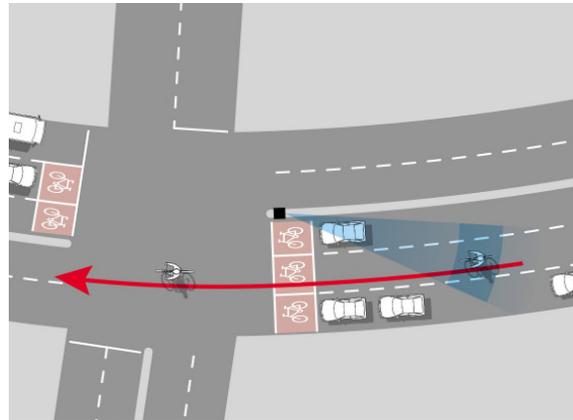
MOVA, SD, Green Wave, Cyclist & Bus detection

By

Oliver Bain

AGD Product Introduction and Support Team

Contents



Traditional Radar

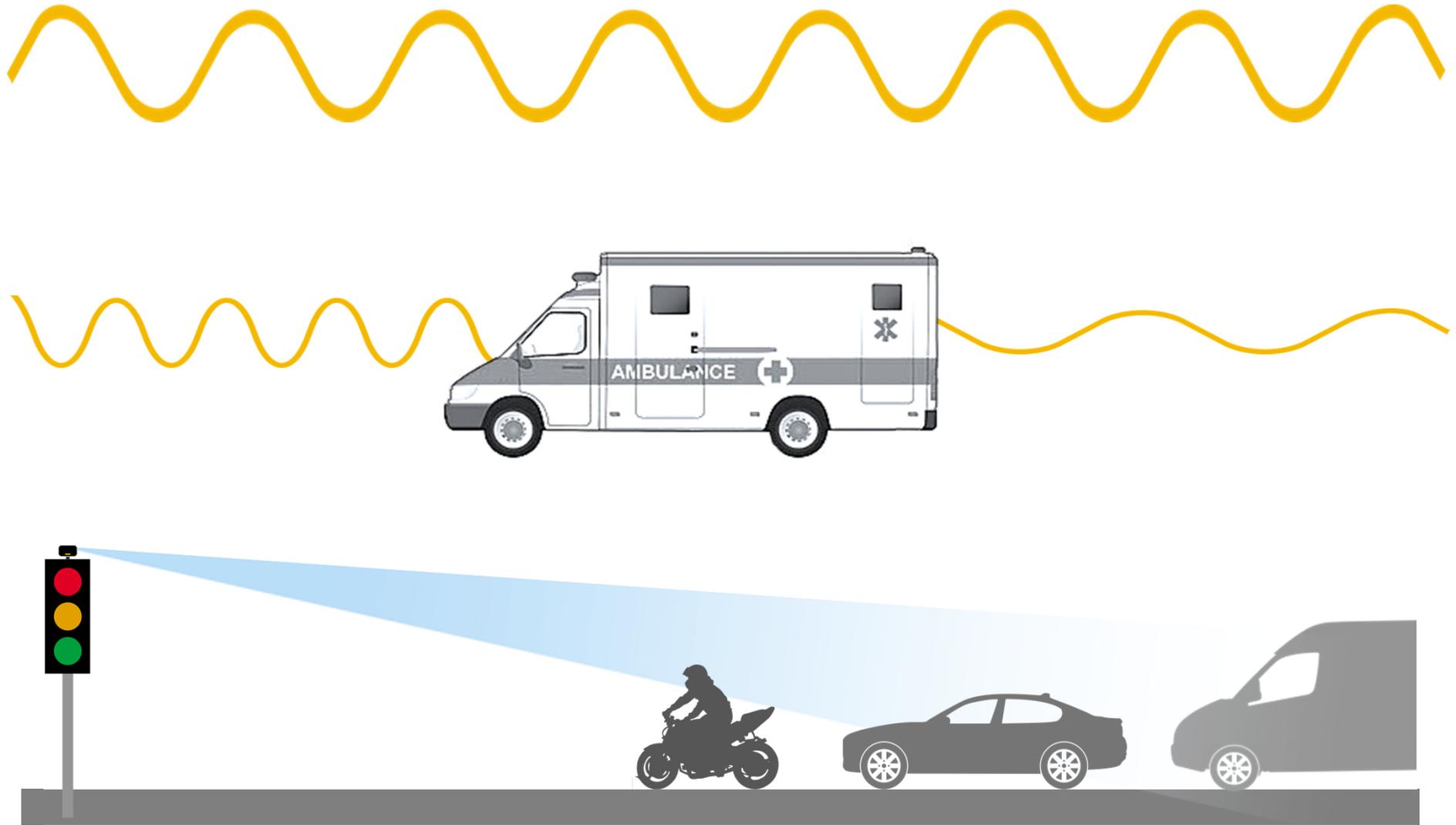
Advantages



Disadvantages



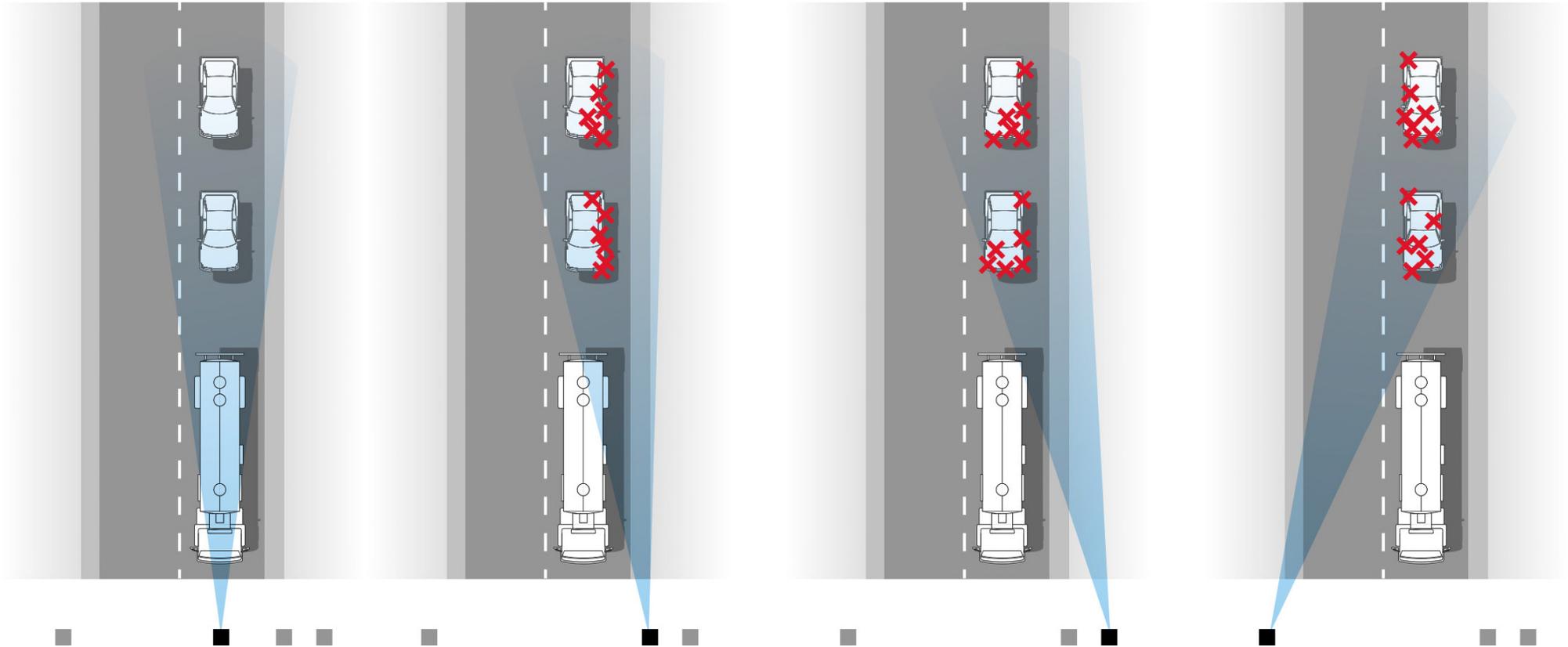
Traditional Radar



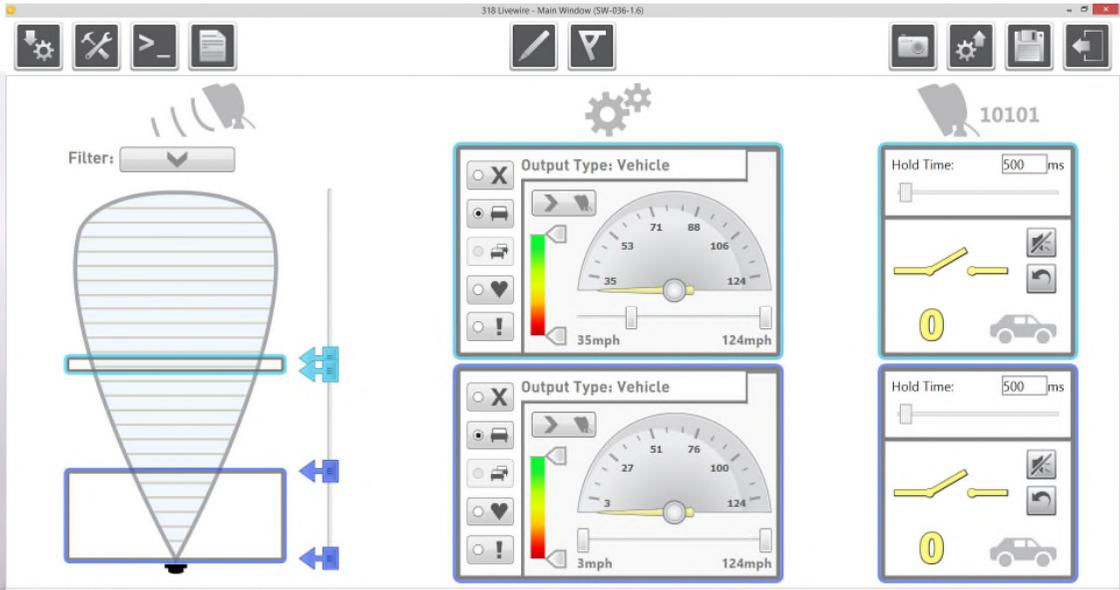
Modern AGD Radar



Understanding Masking and Occlusion



Double Extension (SDE)



The screenshot shows the AGD 318 software interface. On the left, a radar coverage diagram is overlaid on a live video feed of a road. The radar beam is shown as a series of horizontal lines forming a cone that widens as it extends from the radar unit. Two blue rectangular boxes are positioned along the radar beam, representing the 'Double Extension' (SDE) zones. The top box is narrower and shorter, while the bottom box is wider and taller. To the right of the radar diagram are two control panels for 'Output Type: Vehicle'. Each panel features a speedometer with a needle and a color-coded scale (red, yellow, green). The top panel shows a speed of 35mph and a maximum range of 124mph. The bottom panel shows a speed of 3mph and a maximum range of 124mph. To the right of these panels are two identical control blocks for 'Hold Time: 500 ms', each with a slider and a car icon.

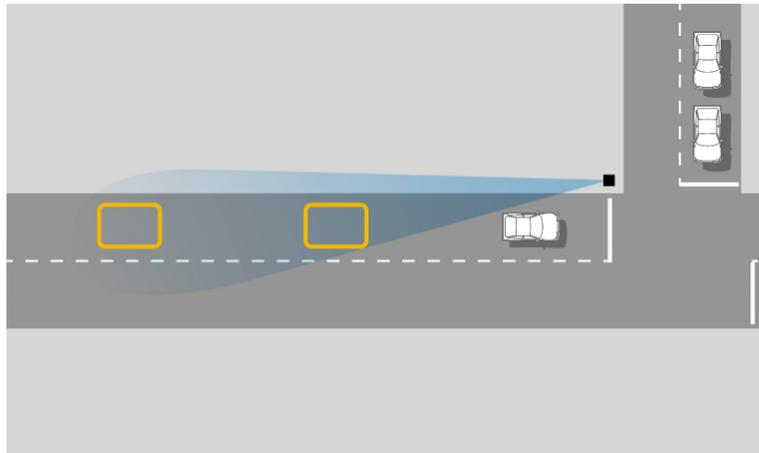
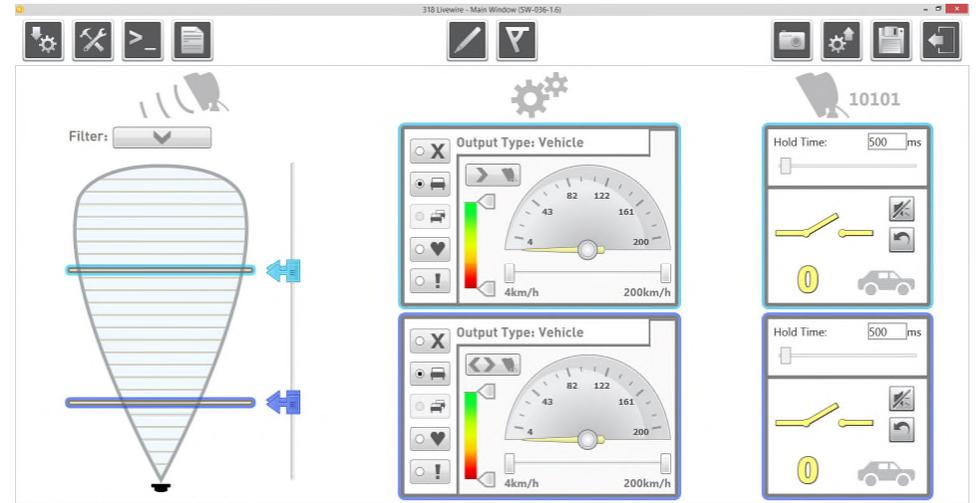
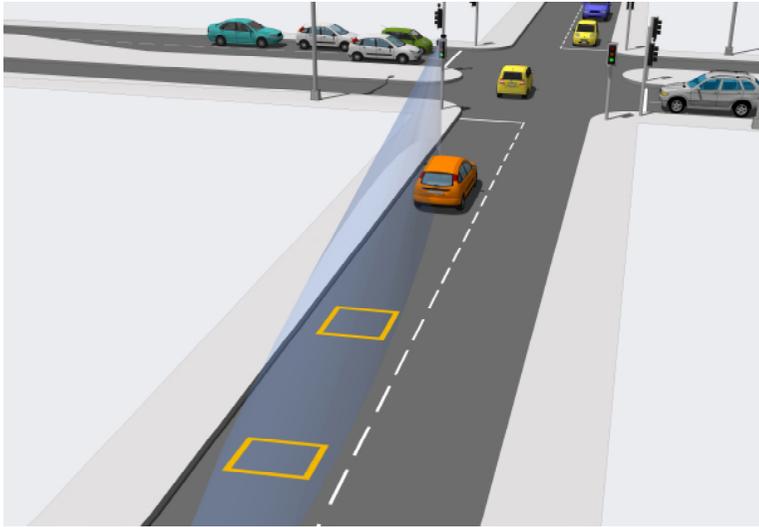
AGD318-3582400001-SDE Channel2

“Saving over
£12,000 on a
crossing”

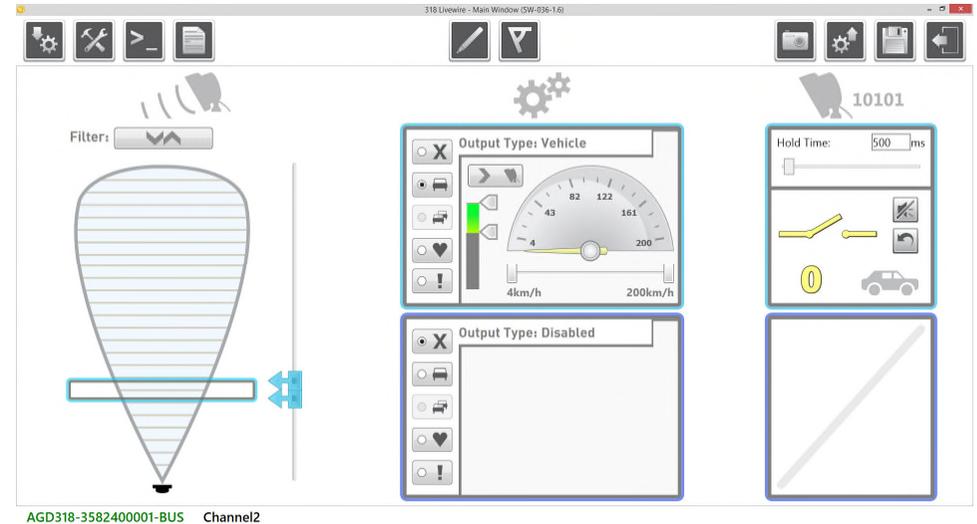
MOVA

AGD 318

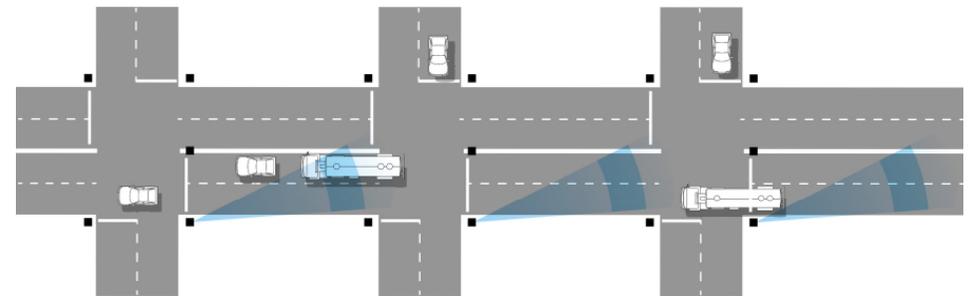
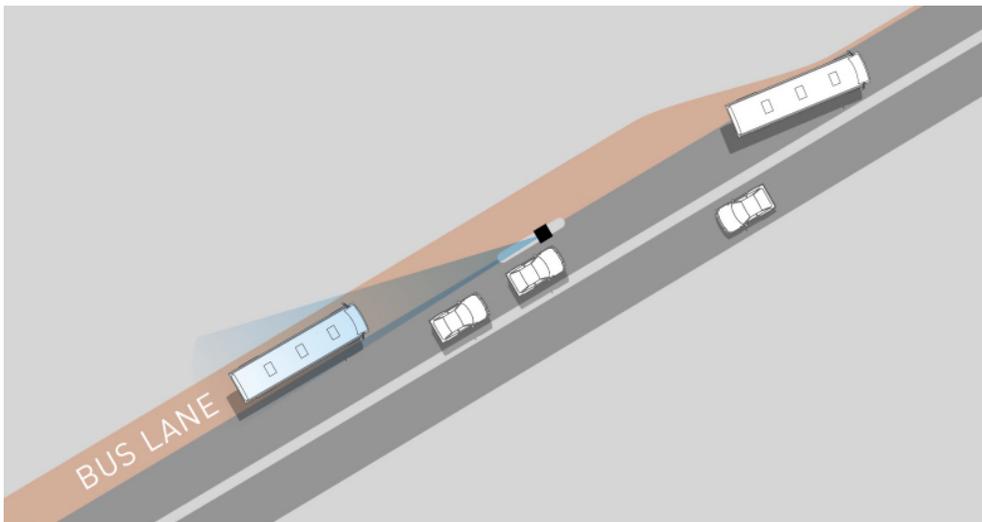
TRAFFIC CONTROL RADAR



Green Wave & Bus Priority

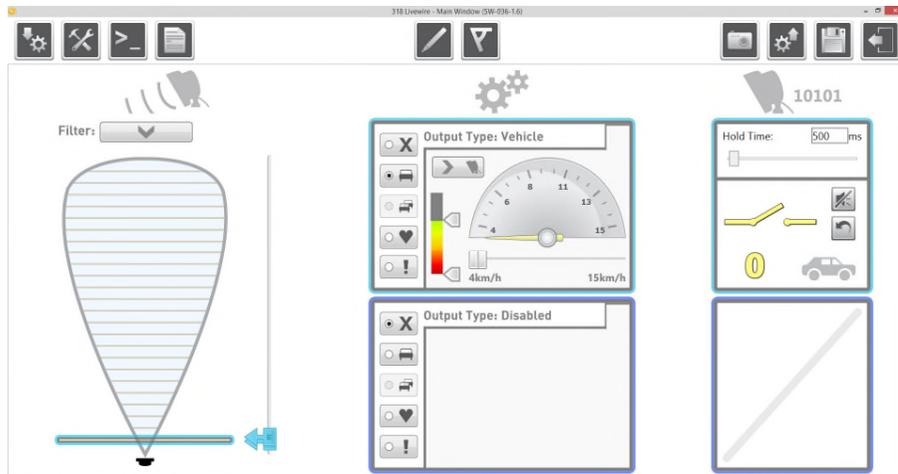
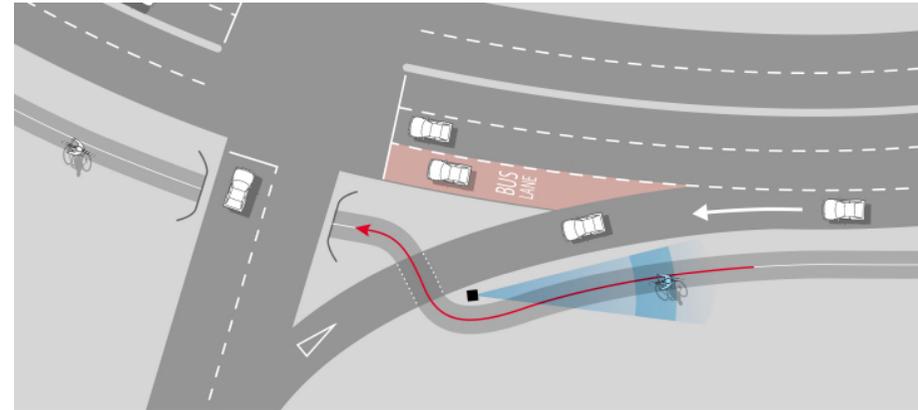
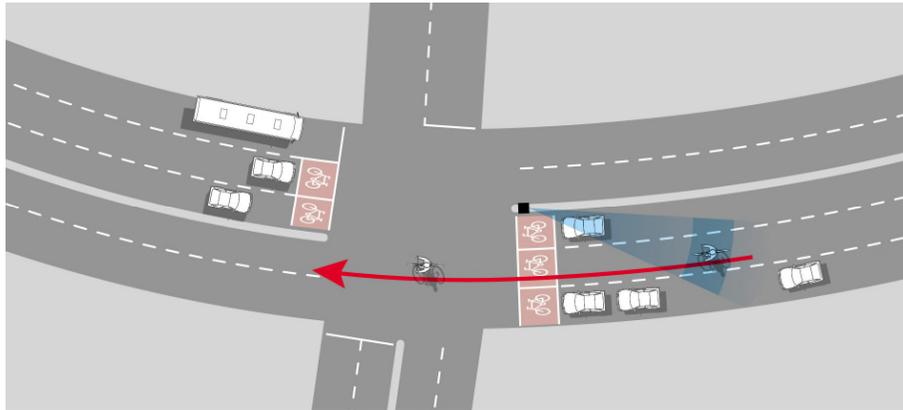


AGD318-3582400001-BUS Channel2

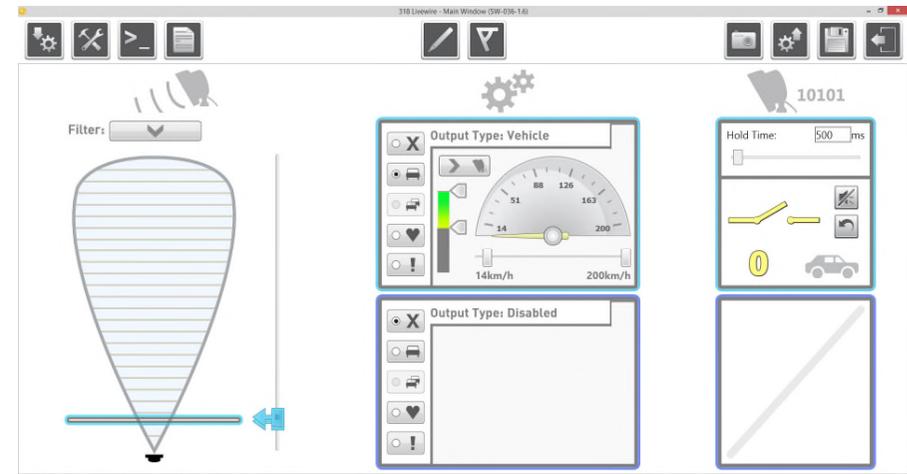


Cycle Differentiation & Detection

AGD 318
TRAFFIC CONTROL RADAR



AGD318-358240001-CYCLE Channel2



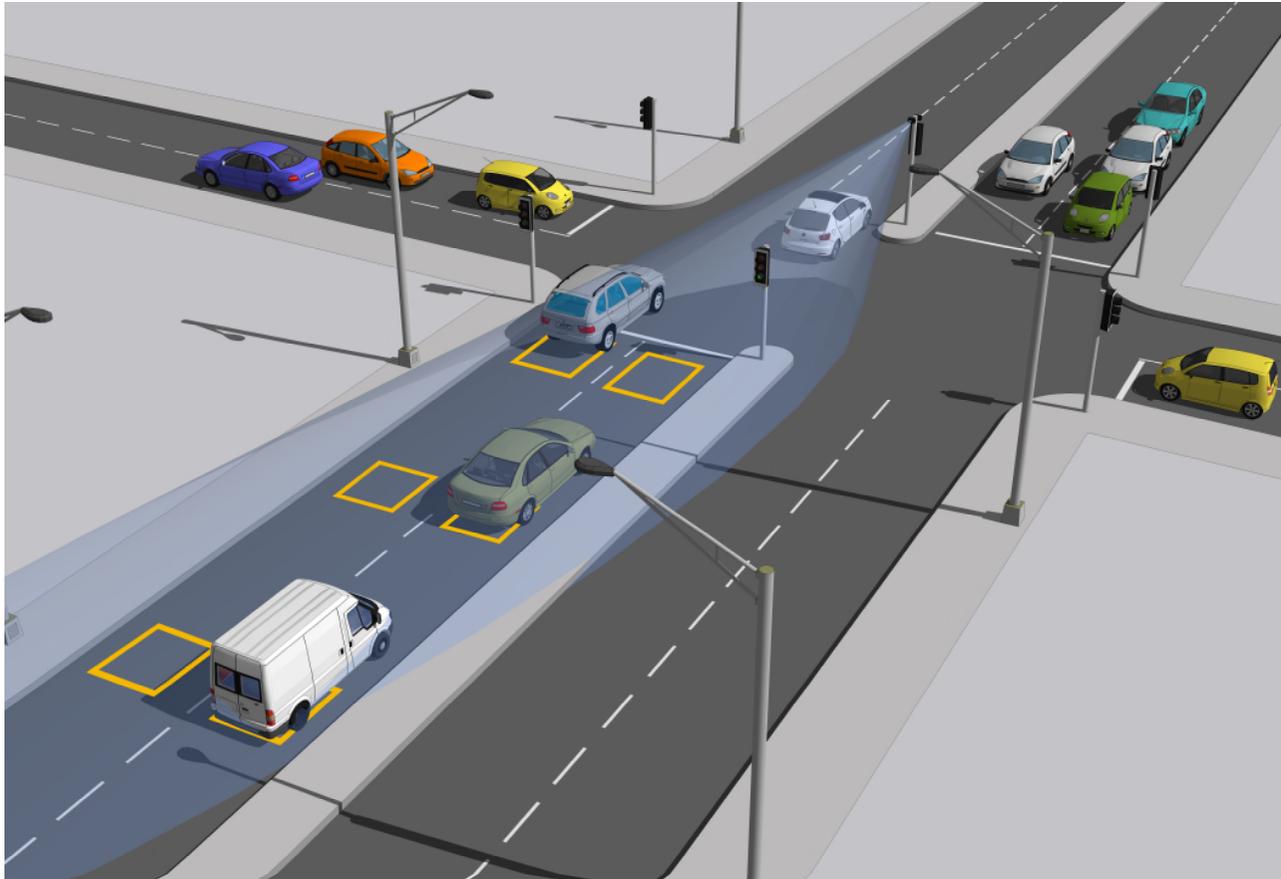
AGD318-358240001-CYCLE Channel2

Summary

- Can detect at set ranges like inductive loops
- Unaffected rain, lighting and foliage
- Masking is manageable
- Saving £10,000s on approaches
- Priority schemes now more affordable
- Increased network efficiency



A New Release



AGD 350
TRAFFIC CONTROL RADAR

AGD[®]
PRODUCT SOLUTIONS FOR
INTELLIGENT TRAFFIC SYSTEMS



AGD 350

TRAFFIC CONTROL RADAR

Integrated Traffic Services Ltd

Specialist consultancy to the road traffic industry

Grand Avenue, Mill Road: Worthing

AGD 318 case study



Full AGD 318 implementation under MOVA control

Why?

- Site needed upgrade to MOVA for increased performance.
- Mill Road is very busy and can have large platoons.
- Whilst currently ducted there was a desire to use a low maintenance system and test out the methodology for future schemes.
- Whilst ducting available some works would of been required to enable loop cutting and cabling due to age of site.

Full AGD 318 implementation under MOVA control

Cost Saving - potential

- Cost for this junction had it not been ducted would have been around 30k
- This includes ducting in hard ground
- Chambers / underkerb
- Slot cutting
- Traffic management

Full AGD 318 implementation under MOVA control

Benefits

- Reduced or no TM during build
- No downtime of lanes
- Ease of maintenance
- Allows carriageway / pathway works without disrupting detection
- Future adjustment without re-cutting

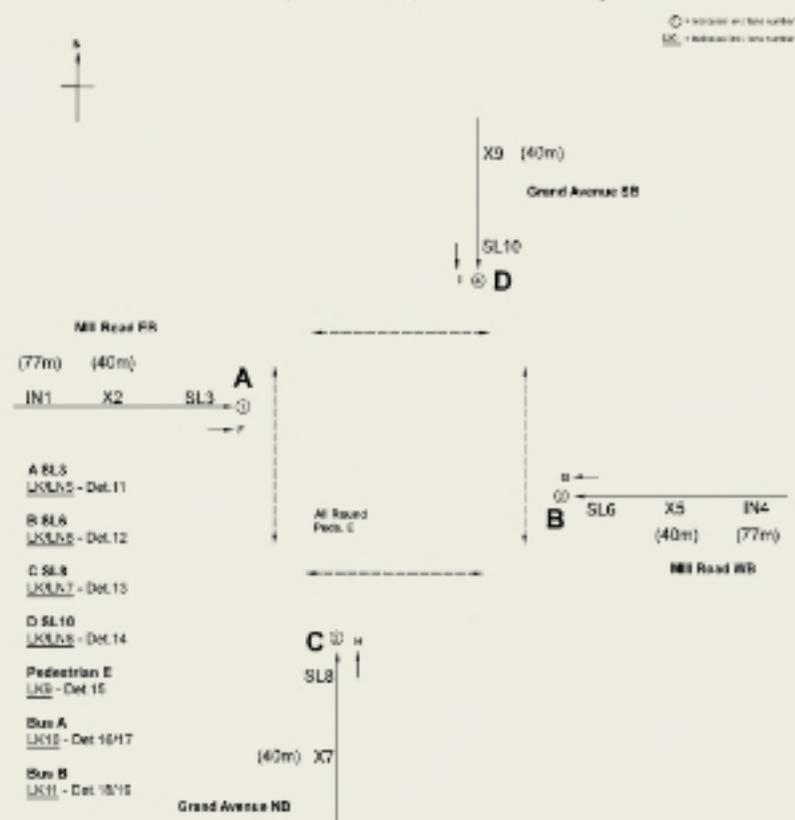
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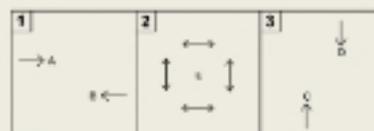
Full AGD 318 implementation under MOVA control

2220 Mill Road, Grand Avenue, Worthing: West Sussex

Method of Control, Detector Location, and MoVA Lane / Link configuration



Method of Control



Full AGD 318 implementation under MOVA control

Design / Solution

- All IN/X loops are AGD318 radar.
- Loop detectors are used on each approach for stopline detection
- Conditioning from stopline Loops to mitigate the lack of stationary detect and low speed threshold of AGD318.
- Changes to normal MOVA Dataset setup / Validation

Full AGD 318 implementation under MOVA control

Conclusions post scheme.

- Scheme was a success
- No perceived lack of performance over loop MOVA
- Conditioning on stoplines not required for side roads on this junction.
- Methodology will be used on further schemes
- Care needs to be taken to observe behaviour and traffic patterns at junctions prior to deployment to ensure suitability or instruct mitigation measures.
- Be careful if sites are prone to exit blocking or have a large HGV content

Thank you



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Paper, case studies and more information:

agd-systems.com

