

Safe roads, Reliable journeys,
Informed travellers



Applying Technology to Roads Management

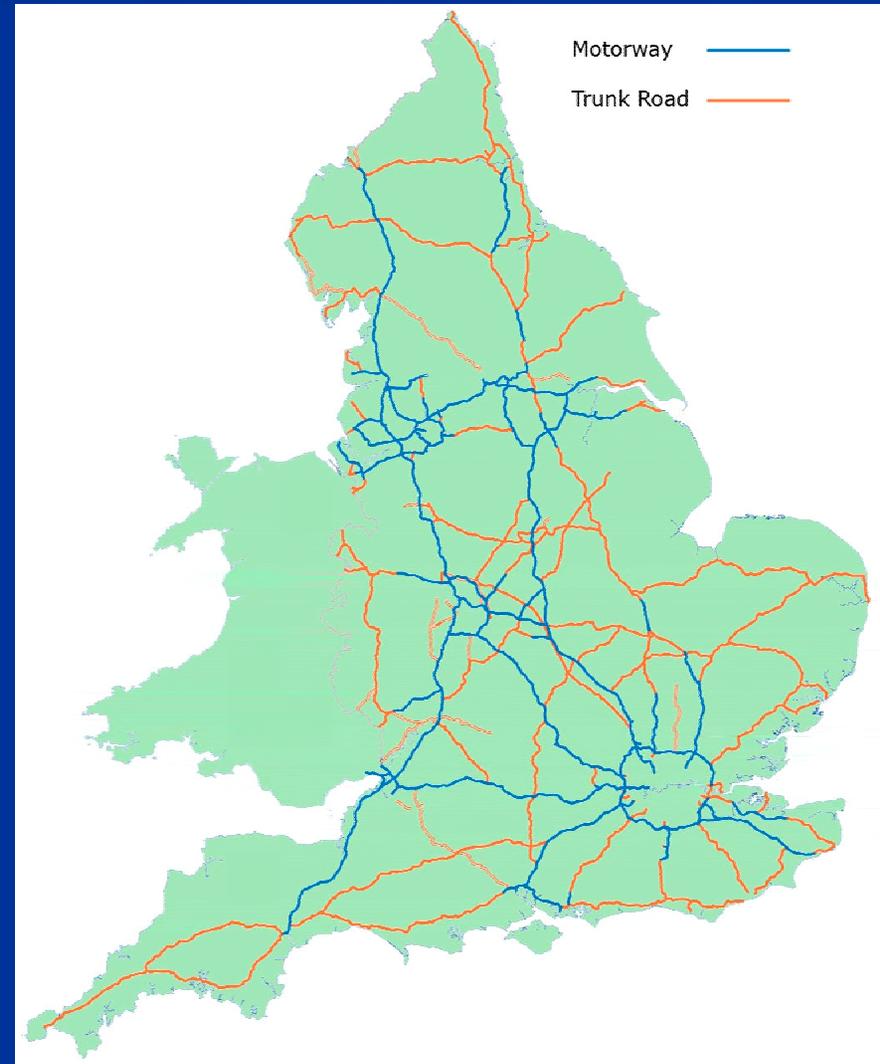
Archie Robertson

Chief Executive
Highways Agency

Highways Agency Network



- 4818 miles (7754 km)
- 2.8% of roads in England
- 31% of all road traffic and 62% of all freight



Roads agency 'too timid to tackle jams'



SLOW TRAFFIC, QUICK THINKING

The Highways Agency must do more to reduce congestion

The HA appears to be a slow driver in the fast lane. It should either accelerate change or be prepared to get out of the way.

Highways Agency 'too slow' to tackle congestion

40 Year History

1959 – First
emergency phones



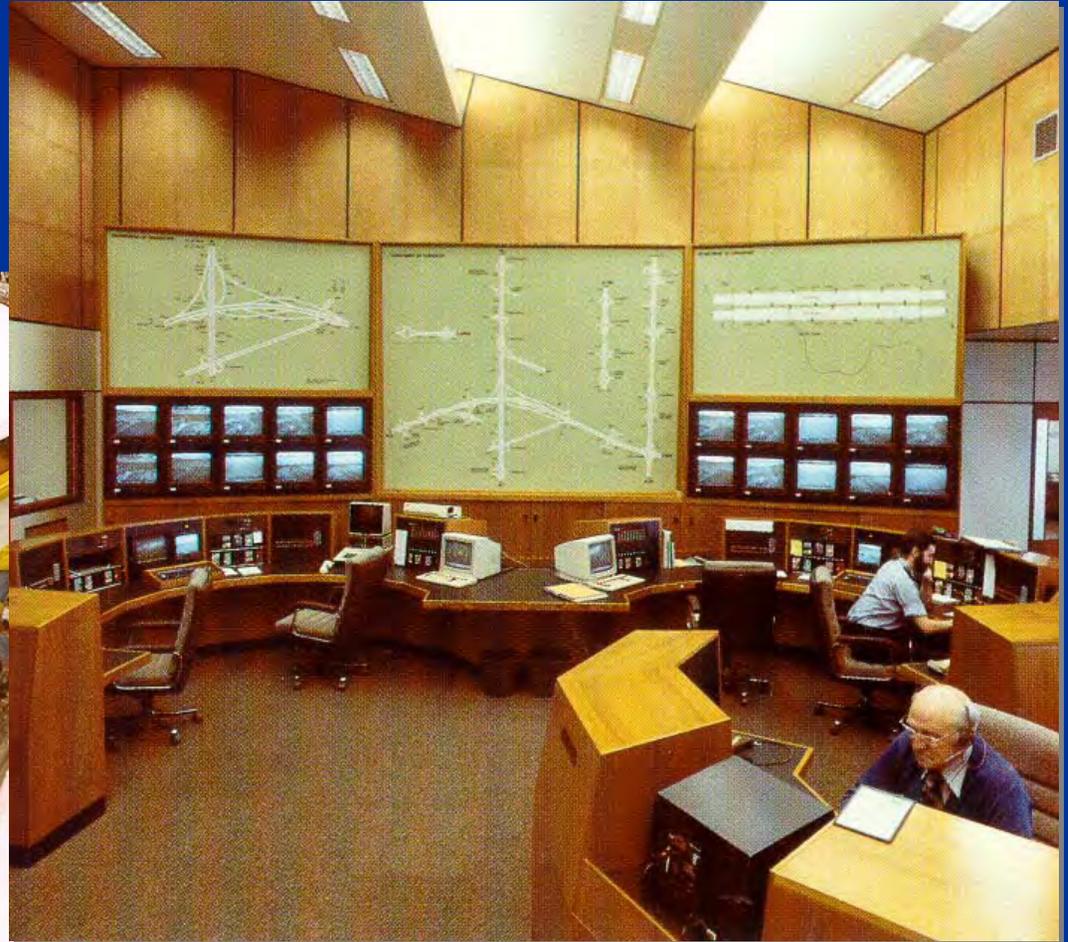
1964 – First signals



1990 – New
generation of signal



Communications and Control Centres



RCCs and Traffic Officers



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Queue Protection



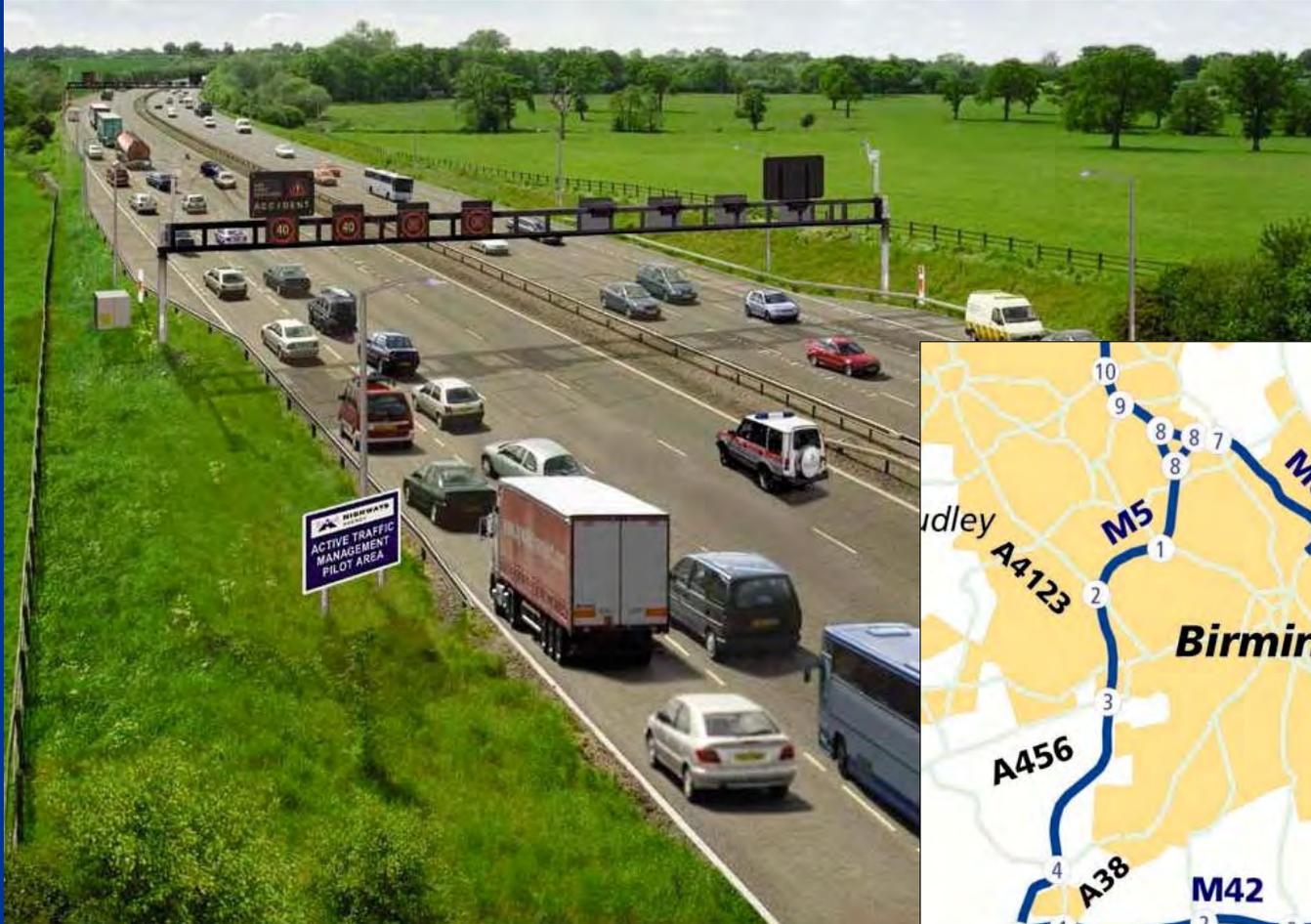
Ramp Metering



Controlled Motorways



Active Traffic Management



MTV – Motorway Traffic Viewer

Figure D9 - Improved Weekly Thumbnail Sketch of Speeds

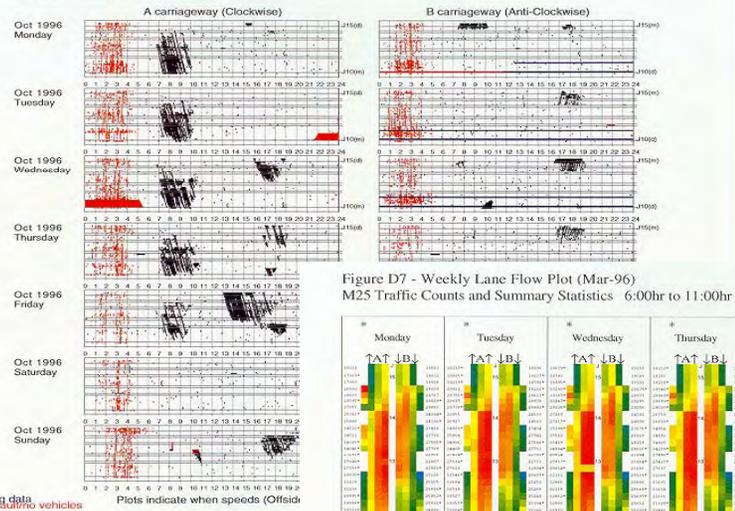


Figure D7 - Weekly Lane Flow Plot (Mar-96)
M25 Traffic Counts and Summary Statistics: 6:00hr to 11:00hr

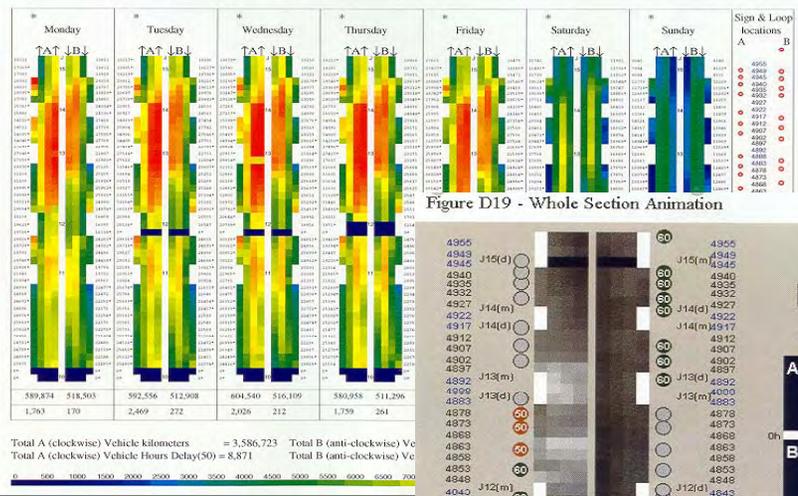
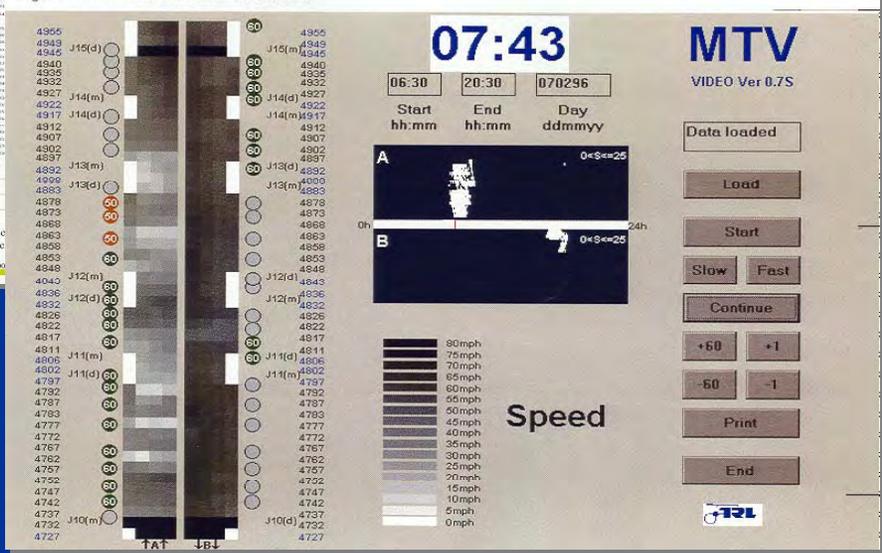


Figure D19 - Whole Section Animation



MOLA – Motorway On-Line Assistant



MOLA, main window

File Viewports Options Help



28/Feb/97 - 07:26

Incidents

Incident at location 6886A
 Start time: 28/Feb/97 - 07:00
 Expected duration: 60 mins
 1 phase(s)
 Description:

Define incident Modify incident Close incident

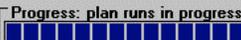
Selected plans

Description	End time	Implem
3 2C/33	0812	No
4 2D/33	0812	No
5 Current situation (Null Plan)	N/A	Yes

Relevant planned lane closures

Road	Start time	End time	Location	Cause

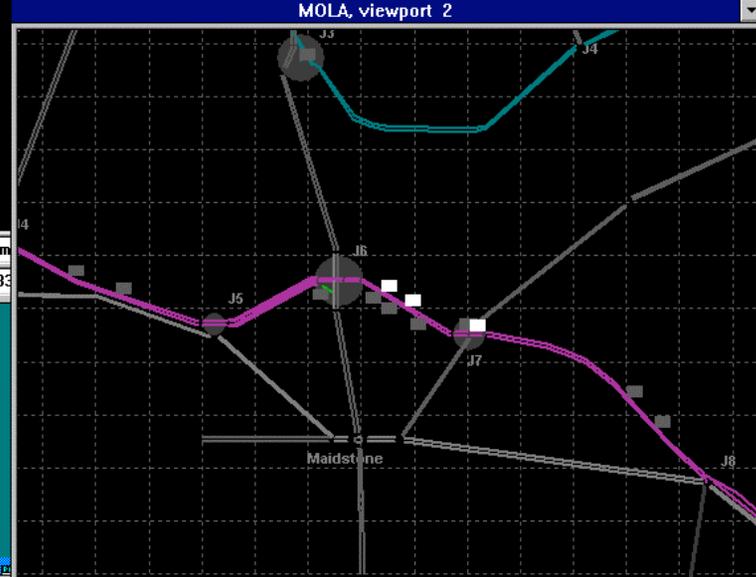
Progress: plan runs in progress



MOLA, viewport 1



MOLA, viewport 2



Autonomom
4: 2D/33

Autonomous 0705 Width: 13km

Colours show:
 Road name
 Cong. index

Graphics Server

MOLA, viewport 3

Program Manager - ALR AWUSER

Paint 9

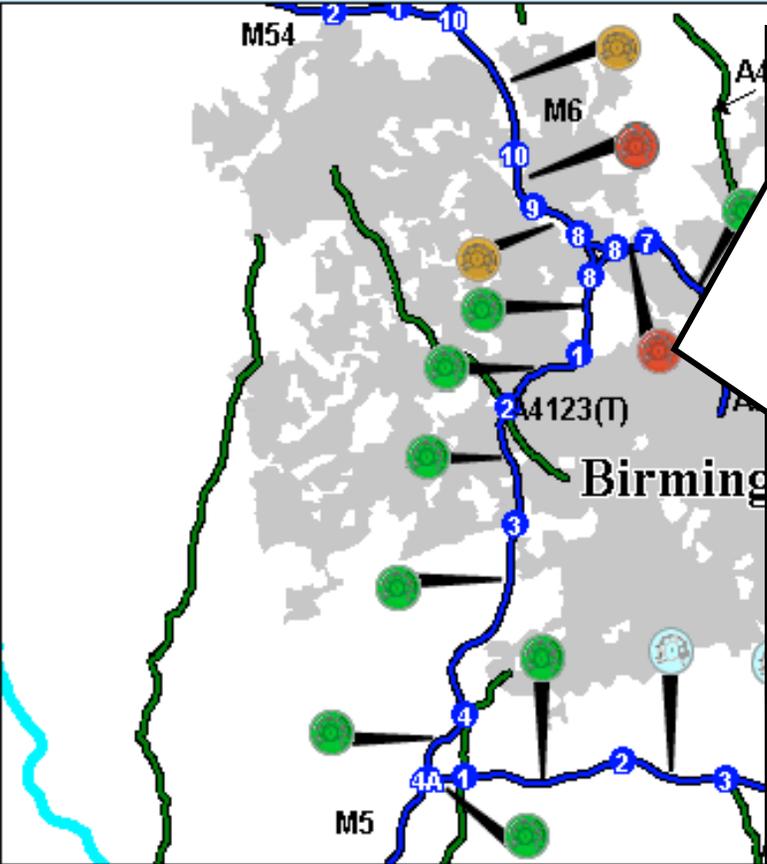
National Traffic Control Centre



Strategic Traffic Management



Information on the Web



Clicking icon gives more information

M6 - Between J7 and J8 North	
	Traffic Volume
	 44/min
	 4/min
Average Speed 46 km/h 29 mph	 8/min
Last Updated 29 Jul, 14:39	 4/min
Total Traffic volume 60/min	

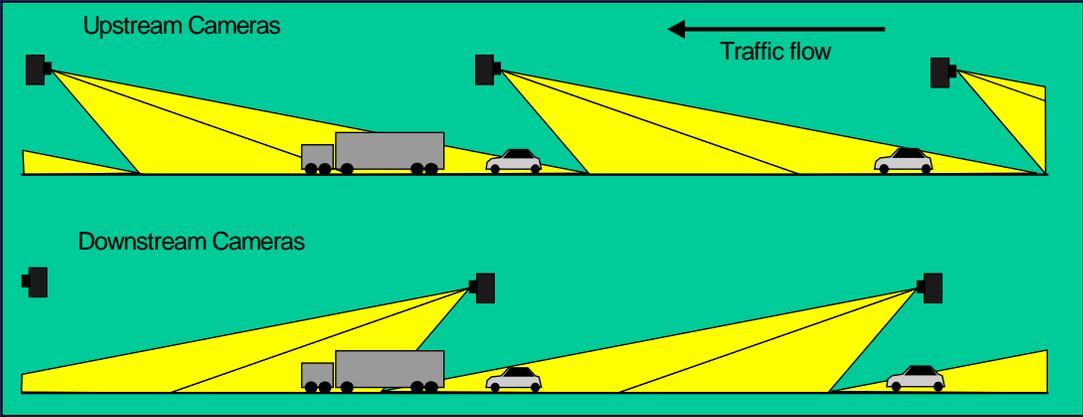
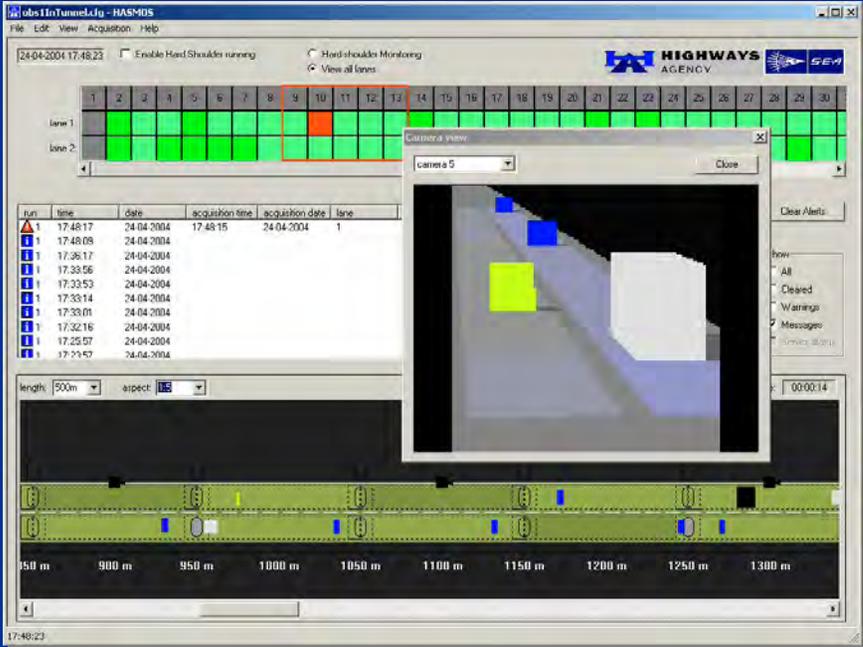
[Leeds Area](#) [Manchester Area](#) [Birmingham Area](#) [London Area](#) [Kent Area](#)

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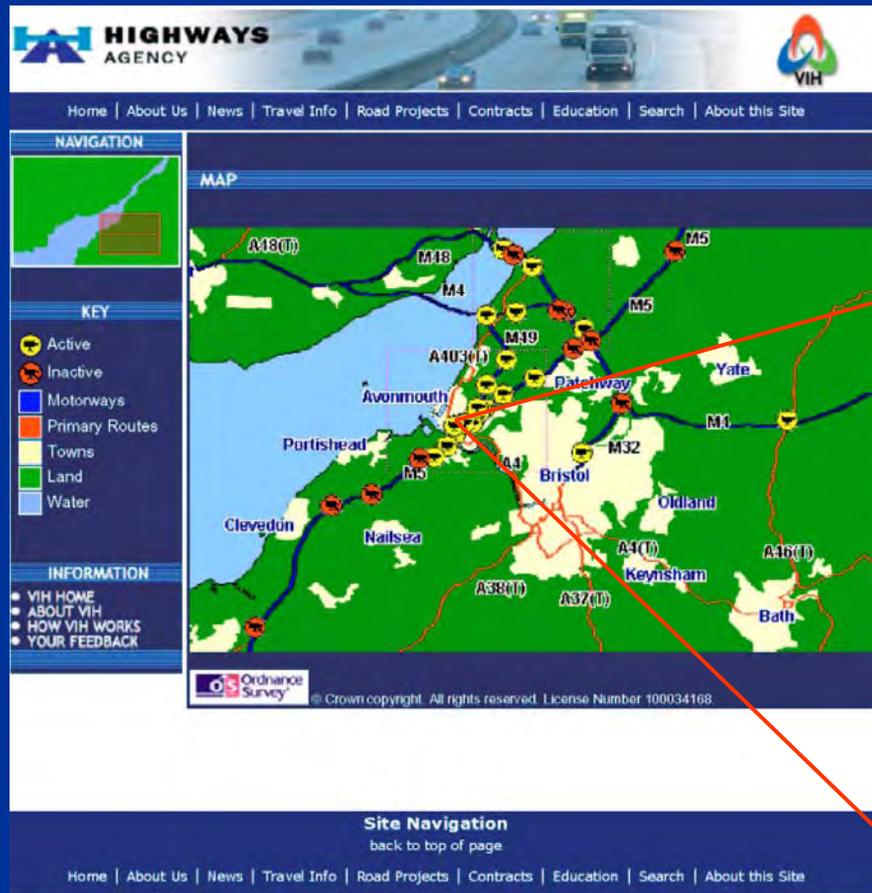


The Future

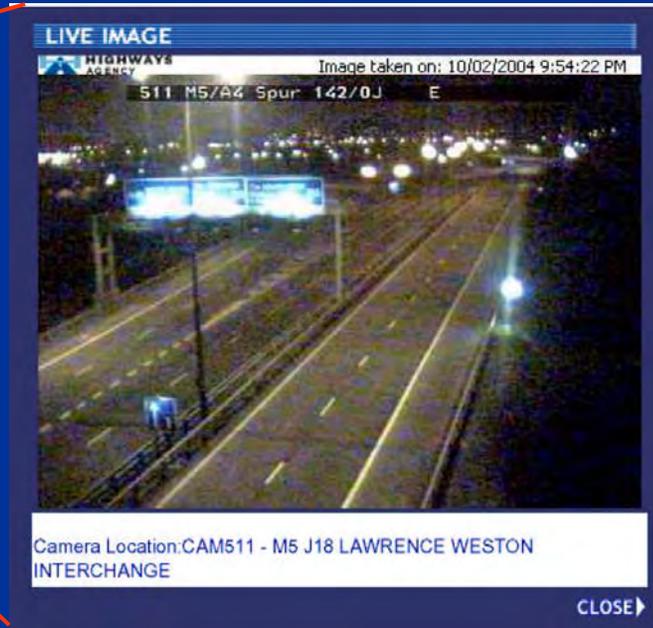
Improved Monitoring



Video Information Highway

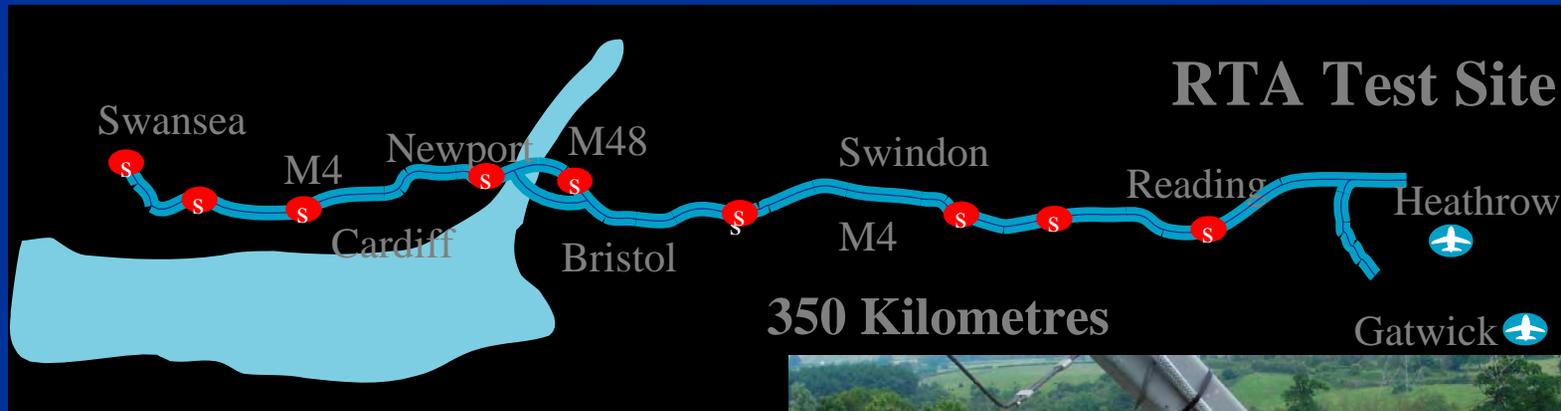


The screenshot shows the main interface of the Video Information Highway website. At the top, there is a navigation bar with links: Home | About Us | News | Travel Info | Road Projects | Contracts | Education | Search | About this Site. Below this is a 'NAVIGATION' section with a 'MAP' button and a small inset map. A 'KEY' section lists symbols for Active (yellow circle), Inactive (red circle), Motorways (blue line), Primary Routes (orange line), Towns (yellow square), Land (green square), and Water (blue square). An 'INFORMATION' section provides links: VIH HOME, ABOUT VIH, HOW VIH WORKS, and YOUR FEEDBACK. The main map area shows a region around Bristol, with various roads labeled (M4, M5, M32, A4, A4030(J), A38(T), A37(T), A4(T), A16(T), A46(T)). A red line from the 'LIVE IMAGE' window points to a specific location on the map. At the bottom, there is a 'Site Navigation' section with a 'back to top of page' link and another navigation bar identical to the top one.



The 'LIVE IMAGE' window displays a night-time video feed of a highway interchange. The image shows multiple lanes of traffic with overhead gantry signs. The text above the image reads: 'Image taken on: 10/02/2004 9:54:22 PM' and '511 M5/A4 Spur 142/0J E'. Below the image, the camera location is identified as 'Camera Location: CAM511 - M5 J18 LAWRENCE WESTON INTERCHANGE'. A 'CLOSE' button is located at the bottom right of the window.

Road Traffic Advisor



Information in the Vehicle



Co-operative Vehicle Highway Systems



Safety – Are we too risk averse?

Should we take greater risks with taxpayers money?

Should we spend more on technology and less on tarmac?

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Discussion