

PRACTICAL VIEWS ON NEW SURVEY TECHNOLOGY

Scott Benjamin
General Manager, Austraffic (Victoria)

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NSW

VIC

QLD

SA

WA

NT

ACT

TAS



Data Requirements

Key points:

- 1) What do you need it for? Beyond your immediate use what will others use it for ?
Need for “Health Warning”
- 2) Importance of outliers – learn to embrace them
- 3) Importance of blending of data (not for today!)

Requirements Versus Collection Methods

Survey Method	Link Count	Link Classification	Turning Count	Vehicle Presence	Queuing	Travel Time or Delay	Speed	Headway	OD & Tracking Surveys	Behavioural Studies	Pedestrian OD
ATC Tube or Piezo based Loggers	•••	•••					•••	•••			
Loop Based loggers	•••	•••					•••	••			
Magnetometers	••	•		•••			••	••			
SCATS inductive loops	••	•		•••				•			
Beam based Sensors (eg Infrared)	••	••		••				••			
Floating Vehicle (GPS)					••	•••	••		•		
Lidar	••	••		••	•		•••	•••			
Radar				••			•••	•			
Camera/s (automatic or manual)	•••	••	•••		••	••	•••	••	•••	•••	••
Mobile Phone Data					•	••	••		••	••	••
Bluetooth (BT) Sensors						•••	•••		••	••	••
Manual Staff	••	••	•••		•••	••		•	••	•••	••



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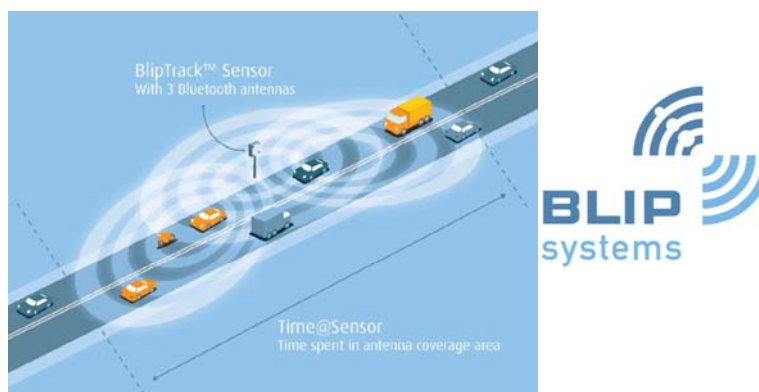


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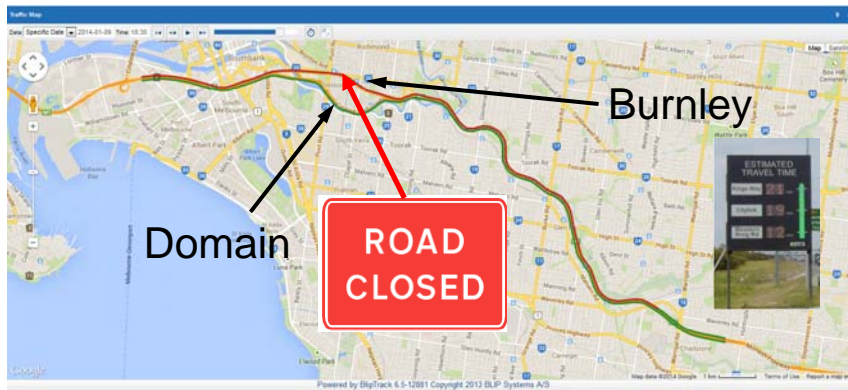
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Time At Sensor

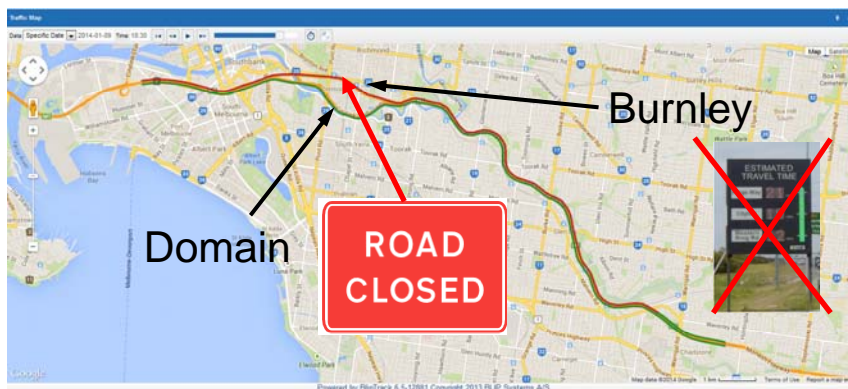
3 Antennae Array: Know direction, understand delay, queue



M1 - Domain and Burnley Tunnel Closures Burnley: 27th – 31st December 2013

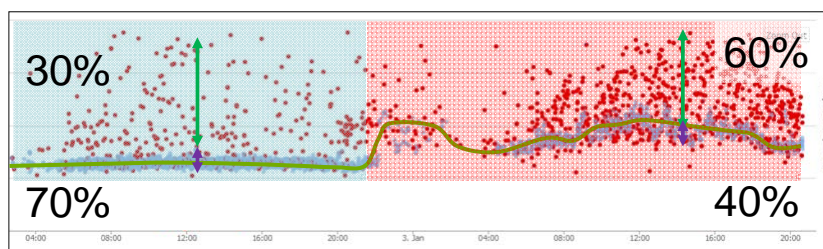


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Bluetooth & WiFi Filtering – Outliers Tell a Story

Spread of outliers shows major shift in data and traffic

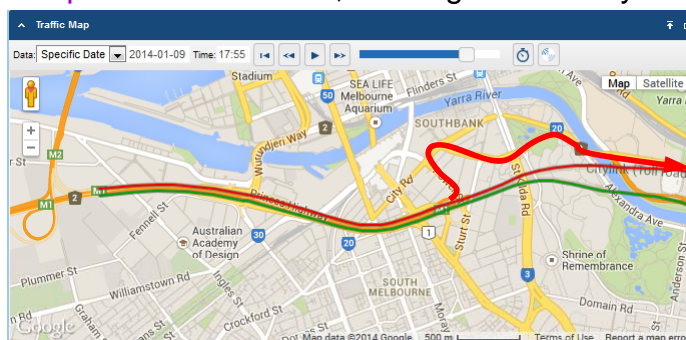


VicRoads avoid **“Carmageddon”**

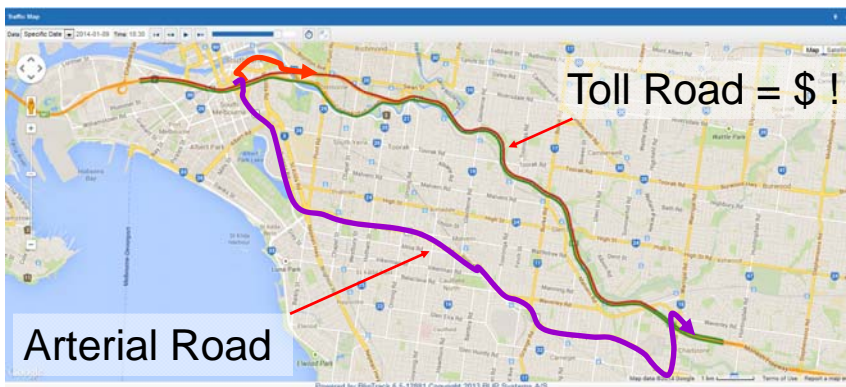
Data for Network Diversion Strategies?

Red line is preferred route

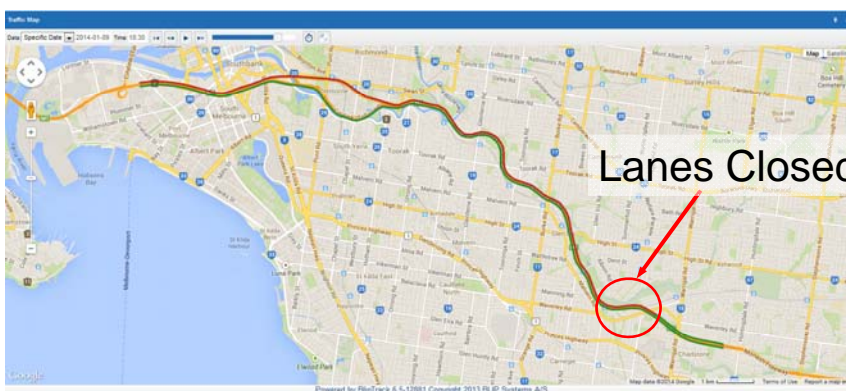
Purple route was used, causing some delay



Data for Network Diversion Strategies?



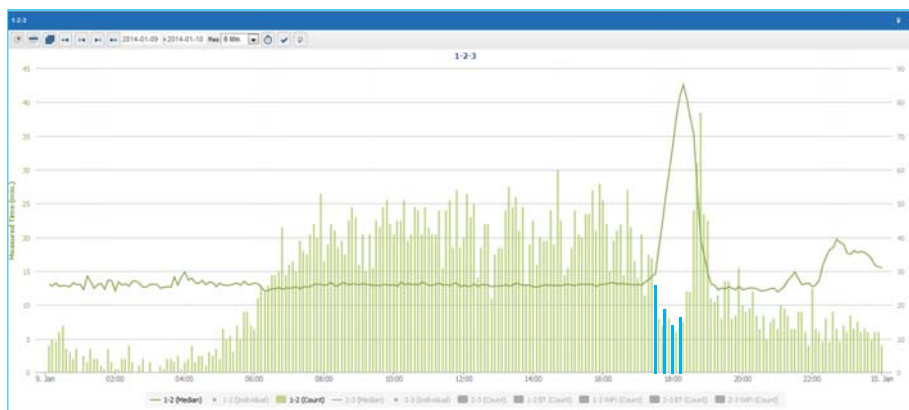
M1 PM Peak Outbound Incident 9 Jan 2014



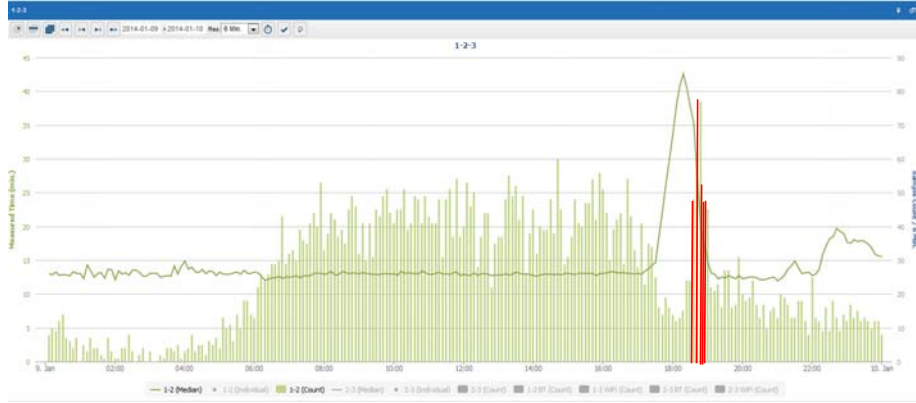
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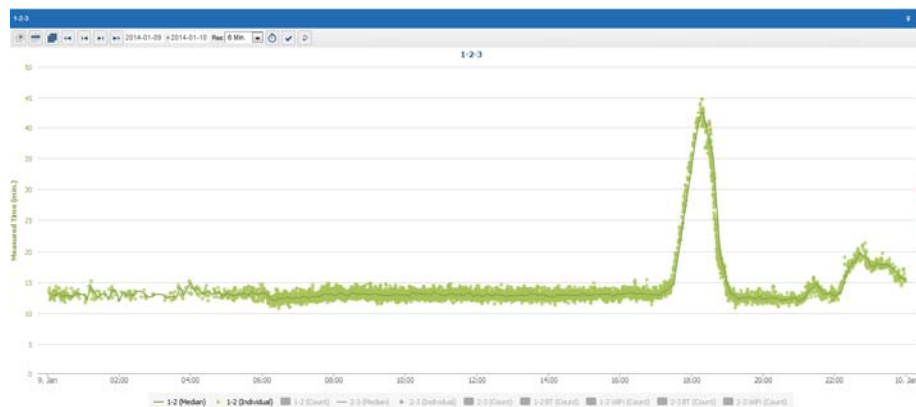
Travel Time Spike and Vehicle Count Drops



Vehicle Count Rises – Latent (captive!) Demand



How many samples needed to understand variability? What is out confidence in the sample?



Many thanks – Any Questions?

More information:

www.austraffic.com.au/news

Contact Nationally in Australia:

jareid@austraffic.com.au

Contact in Victoria :

scott.benjamin@austraffic.com.au

