

Crash risk rating processes

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Submission to Victorian Parliament Road Safety Committee





Data collection at ARRB

- Developed technology to automatically collect data
- Historically this has been for asset management, but now applying to road safety
- Able to automatically collect information on a variety of features e.g.:
 - Horizontal alignment
 - Vertical alignment
 - Superelevation
 - Road surface condition
 - Other variables collected using Hawkeye viewer





Road feature coding using digital video

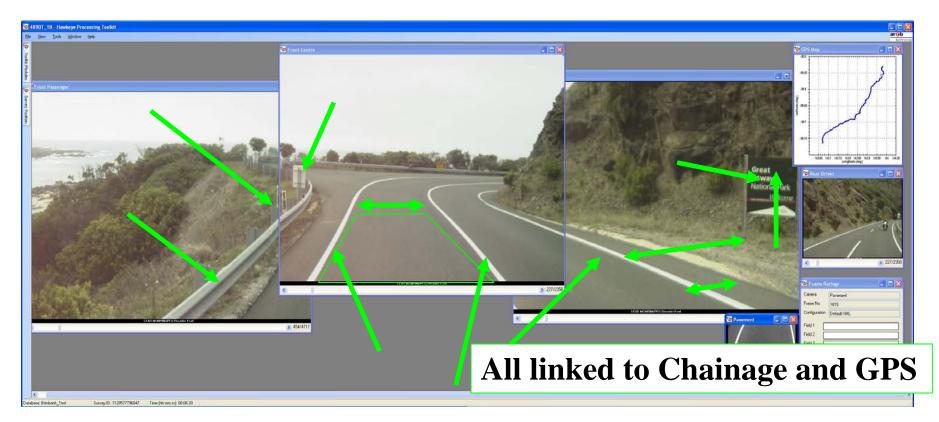


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Think inside the frame to think outside the box.

- If you can see it on the screen we can code it
 - Delineation, Signage, Barriers, Road Side Severity, Clearances, Intersections, Road Condition...



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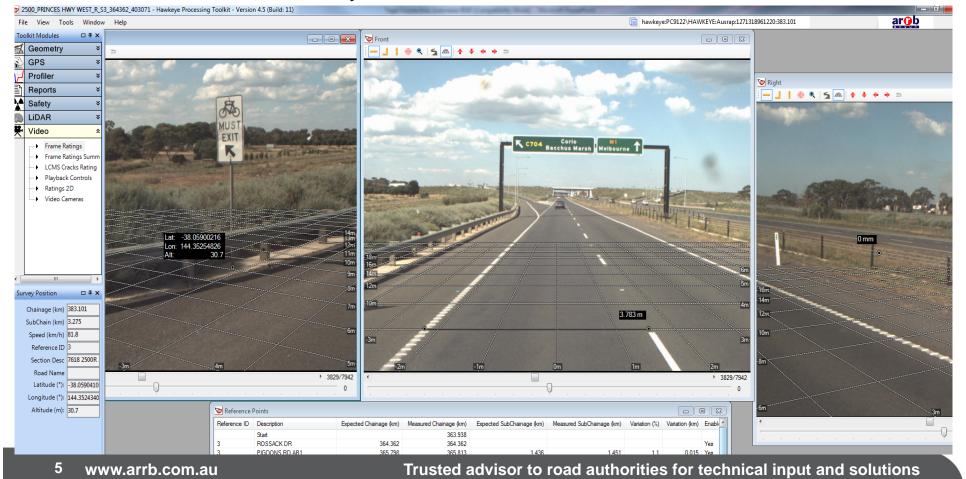
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What we see when we look at a road

For ANRAM & AusRAP:

Lane Width Measurement, GeoReferencing, Roadside Severity, Median Type, Paved Shoulder... and many other attributes.





Network level assessments

📴 Frame Ratings (#926)	
Front 📃 💙 诊 📋	
AusRAP_2012_v3	
Rater (Coder Name)	ROADSIDE SEVERITY - LEFT HAND SIDE
Date	Object distance - LHS 1 - 0 to < 1m
ROAD SECTION	Roadside Objeect- LHS 1 - Cliff
Road Name	ROADSIDE SEVERITY - RIGHT HAND SIDE
Area Type 1 - Rural	Object distance - RHS 1 - 0 to < 1m
Speed Limit 1 - <= 30 km/h	Roadside Object - RHS 1 - Qiff V
Carriageway Label 1 - U-Undivided	
Landmark	
Motorcycle Flow 1 - None	Facilities for Bicycles 1 - None
Bicycle Flow 1 - None	Pedestrian Crossing Facility 1 - None
Pedestrian Flow - Along Road 1 - None	Pedestrian Crossing - Quality 1 - Not Applicable
Pedestrian Flow - Crossing Road 1 - None	Sidewalk Provision - Left Hand Side 1 - None
Number of Lanes (for through traffic) 1 - One	Sidewalk Provision - Right Hand Side 1 - None
ane Width (for through traffic) 1 - Wide (width >= 3.25m)	Pedestrian crossing on side road 1 - None
Paved Shoulder Width - Left 1 - Paved width >= 2.4m	Pedestrian fencing 1 - Not Present
Paved Shoulder Width - Right 1 - Paved width >= 2.4m	
Shoulder Rumble Strips 1 - Not present	Intersection Type 12 - None
Horizontal Curvature 1 - Straight or gently curving	Intersection Quality 3 - Not Applicable
Quality of Curve 1 - Not applicable	Right turn lane 3 - Not applicable
Grade 1 - 0 to < 4% (generally flat)	Intersecting Road Volume 6 - Not Applicable
Sight distance restriction 1 - No major SD restriction	Intersection channelisation 3 - Not Applicable
Delineation 1 - Adequate	▼ OTHERS
Road Condition 1 - Good	Upgrade Cost 🛛 - Low 🔹 🗖
Skid resistance / grip 1 - Good (sealed road)	Roadworks 1 - No road works
Land Use - Left Hand Side 1 - Educational facilities	Service road 1 - Not present
Land Use - Right Hand Side 1 - Educational facilities	Traffic calming /speed management 1 - Not present
Side Friction 1 - Low	Truck Speed limit 1 - Same speed limits as cars
Median Type 1 - Centre line	
Centreline rumble strips 1 - Not Present	
Street lighting 1 - Not present	
Property access point 1 - Commercial Access >= 1	

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How attributes (rated data) are recorded

- Text e.g. road names, chainages, latitude and longitude ...etc.
- Convert from the format provided into the format required for calculation.

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ANRAM users

- Road safety policy makers
- Funders of road safety programs
- Large road project planners (audit)
- Infrastructure program managers
- Regional and local government engineers
- Auto clubs, e.g. RACV

Next steps

- Trials by jurisdictions, feedback
- Implementation by jurisdictions
- Software improvements, mapping
- Future funding programs based on risk assessment
- Direction of future development to be coordinated by ANRAM Advisory Group