Minutes of SNUG 2008 Conference

Kingsgate Hotel, Whangarei

20-21 November 2008

Minutes from 2007 read and action points updated;

Traffic Signal Design – draft of TMU traffic signal design to be loaded onto website for comment.
2008 - Has been loaded onto website, available now.

Software Development (Red Light Running) – TDG have developed systems/processes. Document to be loaded onto website.
2008 - Currently undertaking trial, collecting data and going through validation process. Behind schedule.

Flashing yellow arrow trial – Mike Day from Canberra to do trial.
2008 – Trial did not proceed. Overseas experience positive, but no trial in New Zealand.

LTNZ – Left turn versus U turn conflict – LTNZ to reassess as they haven't fully grasped the conflict issue.
- Covered in a later session.

Safety audit update - Bill S to review and update the Ron Minnema flow chart and put on website.
2008 – Has been loaded onto website.

RTS14 – revised version is not far from being published.

General:

Signalised roundabouts – (Barbara Chard method of control) 1st in New Zealand - Welcome Bay 19th December 2008. Signalised roundabouts are becoming more prevalent.

Innovative diagonal crossings – gone quiet, the guy pushing it has left.

Outstanding Issues:

Guard rails – for visually impaired. No guidelines- is done is Australia but not here.

2008 SNUG meeting opened by welcoming everyone, thanking sponsors for gifts, morning tea, lunch, dinner, drinks. Special welcome to attendees from overseas.

DAY 1

Bob Gibson

GTEP Part 7 demise
(see 1. GTEP Bob Gibson.pdf)

PowerPoint Presentation (See 1. GTEP Bob Gibson.pdf):

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GTEP – Part 7 is no more. It is no longer produced.
Replaced by 'Austroads' series of guides.
The objective of the guides is to mainstream & to take into account all users.
Web based.
Certain elements (old to new) not as well planned as they would have liked. Some things have been missed out.
Parts 6, 9, 10 published shortly.
Part 7 – 'NZ friendly' guide still required?
How should we guide NZ practitioners?
Should NZ conform to 'Austroads' guides?

NZTA Updates, TCD Rules, TCD Manual, Road User Rule, etc

Replacement for MOTSAM - Traffic Control Devices Manual

TCD Manual process:
TCD steering group overseas – last meeting in March.
Project going ahead.
Who should be in working group, consultants etc?
Aims to be only web based – not hard copy.
What role for SNUG?

Bruce – the key thing with TCDM is to take the opportunity to comment. When documents come out take the time to get consultants/practitioner input.

Ross – Part 7, any major changes?
2 Years – no publications. 13 done last year.
Not many changes – process rushed.
50 pages – meant to be but much larger! Big documents.

Bob – Consultation meant to be going through this year – limitations. May not go out to consultation.

Road user rule – use of cell phones. All submitters supported the concept.

Cyclists – advanced cycle boxes, hook turn, HT driving peaks. Using traffic impact assessment - not as modern as they could be. People not willing to comment, too busy.

Pressure on changing give way rules. Will have an impact on how intersections work. Will come into effect June 2009?

TC Device rule, got time to have views known – looking at structure of schedules, looking at cutting back, making simple.
Minor changes to the rule.
Manual – NZTA – MOTSAM under one brand, reviewing manual. Looking to settle down as one company. No overlaps or duplication – working closely.

Special vehicle lanes – TCD rule – make bus lanes work more effectively.
Major changes with parking, reduce signs.
MOTSAM documents – level crossings & traffic control devices manual -due for publication.

Standard for VMS
TCD feedback – discuss with group as a whole.
Pedestrian issues – legislation, signals etc. Request for pedestrian protection at pedestrian crossing. Pedestrian detection system. How can this be introduced? TCD and road changes. We comply with Australian standards.
Pedestrian and cyclists benefited from give way rules changing in Victoria.

John – rail crossings guide – due for publication. Adopted from ALCAM. All level crossings will be surveyed in the next year. They want to have barrier arms at every crossing.
Try to get Roy Percival to attend next meeting!

Part 7. Electrical Design absent. Good idea.

Road markings and signage – inconsistency issues, need to address.
Electrical design issues no more as we have gone to LED.

Wayne King

The Colour of Traffic Signal Poles

We are losing yellow poles. Should we continue?
Save money by not painting.
Visually impaired pedestrians – easier to see poles if they are yellow, if left galvanised harder to see.
In Auckland there are none yellow - it is an urban design issue.
They look better left galvanised.
Should they be allowed to paint poles any colour?
In Australia safety is not the issue – it is cost.

Consensus to keep painting poles

RCA's

Update on SCATS/Signal activities in each centre

Dunedin	66 signals
Invercargill	27 intersections 6 midblock crossings 18 masterlink 32 scats, 1 not connected
Christchurch	256 signals 210 city 44 NZTA 2 ASN 238 int 250 masterlink 84-85 cameras 4 new int/yr 1 set of Q warning signals

Nelson	14 intersections 9 masterlink 13 SCATS 2 int Richmond proposed 2 int Tasman proposed
Timaru	17 signals
Wellington	123 signals 105 city 18 NZTA 20 cameras 108 masterlink
Hutt City	17 signals
Palmerston North	34 signals
New Plymouth	19-20 sites 3-4 NP Council controlled No flexilink-looking to implement
Rotorua	16 signals 9 SCATS 2 midblock ped crossing All flexilink
Napier	15 signals No midblock ped crossings 1 intersection isolated
Tauranga	30 intersections 3 midblock ped crossings 8 masterlink All flexilink
Hamilton	56 sites Including 3 in Huntley 9 SH's 7 midblock ped crossing All but 2 SCATS All masterlink
Auckland	685 SCAT sites Auckland: 298 Manukau: 141 North Shore: 88 Waitakere: 60 Rodney: 6 NZTA 92 144 midblock ped crossing Most masterlink Very few flexilink 50 intersection aren't connected to SCATS TMU manages signals in Auckland District ADSL upgrade for the North Shore
Whangarei	22 sites 6 NZTA 3 ped 9 Masterlink Many have flexilink LED upgrade on SH1 Dent Street trial successful.
Hastings: 16 signals Wanganui: 15+ signals	

Fraser Johnson

RTA Update

PowerPoint Presentation (See 2. RTA SUNG 2008 Fraser Johnson.pdf):

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NSW government - new representatives in government
- New minister for roads
- Premier of NSW

Realised RTA corporate plan
SCATS in RTA corporate plan

Road and Traffic Authority – NSW. Known as RTA. Established 1989 – amalgamation of 3 organisations.

Primary responsibility:
RTA Stats 07 – 17,793km of state roads
Total value 69 billion.
Other assets: 180 offices.

TMC – Transport Management Centre, 7 days- 24hr.
Fraser showed flow chart of RTA network management.

There are some expected retirements within SCATS development team.

SCATS – Latest instalments:
- Bogotá – Columbia
- Durban – South Africa
- Sunnyvale – USA
- Las Vegas – USA

There isn't a SCATS website, watch the RTA website for developments.

Ken McCallum

New Features in SCATS

PowerPoint Presentation (See 3. SNUG 2008 What's new in SCATS V6.6.pdf):

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This presentation describes the significant changes to SCATS since version V6.5.2 up to and including V6.6.2:

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Fixed a deadlock in the processing of alarms
The ITS port supports full functionality for route pre-emption (same as SCATS Access)
Speed information is now passed to an ITS application for route pre-emption control
An ITS application can now edit an intersection's site notes

ITS licences can now be supplied in two parts

- One part goes to an ITS developer
- ITS developer sells program to users
- The second part of the licence is supplied by the RTA to the user before the ITS program will work

Intersection location requests from a communications server (e.g. ADSL router) now log:

- Intersection number
- IP address of requester
- Region controlling the intersection
- IP address and port of controlling region

Aids in evaluation and fault finding

The state of the Queue file is now logged at start-up

Increased the maximum number of messages for SCATS Access from 1000 to 2000

- Prevents unintended disconnection of Access on an update of Route Pre-emption plans

Errors caused with Windows "listen" sockets being used by another application are now logged

Connections on "Listen" sockets are now re-attempted after an error

- An error previously required a restart of the Central Manager

Elapsed time Strategic Inputs provided for sites with continuous flow

Fixed problem with zero data in a Strategic Monitor

SCATS now logs if it switches the lamps off because of a checksum alarm

New dwell option to prevent skipping of demanded phases

Fixed bug that produced NC ST DZ BO alarms for intersections that weren't communicating

New ST alarm detection

Additional messages sent to anyone monitoring route pre-emption

Networked sites (COM=NET!)

The latching of ST, NC, DZ alarms has been removed

ITS applications can now read system files

Strategic detector information is now available through the ITS port

VR21 (disable SC/LC/IH alarms)

GT alarms are no longer generated in Flexilink or Isolated modes

RK=MM (enable Maintenance Mode)

Controller log entries now written to the SCATS daily event files

Killing a plan below a nominated cycle time didn't work if all the DS values were zero.

A VE error (Validation Error) is now a major alarm

Updating best MF for the day

IMAP problem found and fixed

IMAP now needs to be enabled

If you use IMAP now, you must ensure that EI is added to your region options otherwise IMAP will not work

Controller clock updates have changed

- SCATS now checks for a clock error before attempting an update
- If difference is within 3 seconds, no update

Should reduce the connection time on a dialup site

Clock Alarms (CA) now show on the alarms panel when monitoring a site

Clearing of clock alarms is now logged

- A clock alarm clears if the time is correct at the next 10 minute boundary

An OD alarm (overdue message) and a WD (Watchdog) alarm no longer prevent a clock update

Intersection offsets and subsystem offsets can now nominate the start of a phase or the end of a phase

Software deadlock fixed

Asking for detector volumes for detectors higher than 16 no longer causes an OD alarm on controllers less than VC 4

SCATS now logs

- Intersection fallback ON
- Intersection fallback cleared

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Arthur Sims passed away – the "father" of SCATS

Questions:

Any changes to SCATS map?	Has not been touched for 4-5 years.
Any changes to traffic reporter?	It is in an unknown state, still has bugs and it needs replacing but they don't have the manpower.
Time Distance storing?	Recreate the time distance diagram from history files.
Any work on the history file?	There is a list of missing items, signal groups etc. If they get enough information they don't need IDM files.

Bad news – SCATS pricing has changed. It is cheaper initially but have to buy packages separately e.g. 'Traffic Reporter' & 'Controller ID' – they will no longer come with SCATS. Don't know what the future holds for pricing.

SCATS bugs:
Pie graph fully one colour – they know what causes it and it is about to be fixed.
Skips showing phases – has been fixed.

Is it possible to have a confirmation to the abort button? (Do you really want to abort...?)

Main changes to SCATS:
1 new program to integrate all sites
2 intro new access control by zone
3 if you change data, old data will be logged and saved in a database (date/time/who etc)

Fraser Johnson

SCATS communications options

PowerPoint Presentation (See 4. SMUG - SCATS_PNRP - Technical Solutions.pdf):
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SNUG Project Review – Technical Replacement Solutions

For 30 years, SCATS has used directly connected, leased voice grade lines (Telstra PAPL, now called VGDL) to enable coordination of Traffic Signal Controller sites

The RTA currently uses 2,600 voice grade dedicated lines (VGDL) to communicate with TSC sites across NSW

RTA was formally advised on 30-Aug-07 that Telstra will cease to provide the current VGDL service as of 31 December 2009

The SCATS PAPL Network Replacement Project was initiated to identify a suitable replacement technology, and to deploy this solution as a replacement for all 2,600 current VGDL services - prior to Dec 2009

Once a suitable PAPL replacement is chosen, ensure that it is deployed into the operational network in a structured manner that does not impact of SCATS functionality

The 2006 tender process proved that ADSL could be a viable PAPL replacement technology, but a suitable commercial deal was not found

In early 2008, a number of formal technical trials were established to and 3 suitable alternative technology solutions were identified:
"**ADSL**", "**Dial IP**", and "**PSTN Modem to Modem**"

Three devices have been **RTA Type Approved** for the solutions:
Micro Connect - ADSL LCM
Micro Connect - DIAL LCM
Dataplex - PSTN Modems
The RTA needs to transfer 2600 existing PAPL services that provide connectivity to Traffic Signal Controller sites.

Start date currently planned: 6-Oct-08

Questions:

Are RTA investigating installing there own network?	They have to rely on existing networks. This is due to the share scale of the RTA traffic signal network – not economic.

Vaughan Penney

Build your own Communications Network

Vaughan demonstrated how easy it is to create a network using routers and fibre.

Questions:

Does the daisy-chaining of all things going into the device cause problems?	They have plenty of band width, routers etc.
Run a red light camera network?	Yes.

Jeff Greenough (GHD)

On-site monitoring measures

PowerPoint Presentation (See 5. Optimisation Presentation.pdf):

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Onsite Monitoring

The process of maintaining the network at the optimum efficiency is an ongoing process

Primary Function:
Safety
Promote safety through operational changes & recommendations
Efficiency
To achieve the TMU's goal of an efficient network
Secondary Function:
Advising
To identify, promote & report on areas of improvement or maintenance upgrade.

Identifying the Issues:
Operations
Issues immediately relating to traffic signal operation
Maintenance
Reporting on faults to be repaired
Issues predominantly covered by Maintenance Contract
Advisory
Issues requiring planning or have an impact on budget
Examples include recommending new software

Taking A Proactive Approach:
Getting the network operation issues addressed at an early stage
Early involvement of developers or TLA's with the Network Operators

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Andrew Metge

Route Optimisation

PowerPoint Presentation (See 5. Optimisation Presentation.pdf):

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What is Optimisation

Maximising the Efficiency of a given Transport Network using Intelligent Systems and Solutions to develop a safe, reliable, more environmentally friendly and user friendly Network.

Levels of Optimisation
Through carrying out one or more levels or a mix from the levels:
Level 1 Individual Intersection
Level 2 Multiple Intersection Optimisation - Groups of adjacent Intersections optimised along routes through time setting and SCATS data changes to form marriage chains

Level 3 Geometric Route Optimisation - Enhanced version of Multiple Intersection Optimisation with emphasis on intersections and route geometric constraints
Level 4 Corridor Optimisation - Optimisation of a corridor with more emphasis on the wider impacts of traffic management with a view to improving street appeal, access to public amenities etc.
Level 5 Area Wide - An extension of corridor optimisation with a wider view of how an area may be treated to more effectively manage traffic.

If the site has a heavy pedestrian demand you take that into account.

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Questions

What modelling techniques were used?	Linkview, Transit GPS Journey Time Survey Saturn Model.
Was there a focus on crash history?	Yes. Site by site basis.
Does doc's have a risk assessment?	No – have to improve.
Arterial route – measuring people not vehicles?	Not something GHD optimise on.

Housekeeping – thanks to everyone who did presentations. Thanks to Ken McCallum for all of his hard work – it will be his last conference.

Close of Day 1

DAY 2

Jeanette Ward

Protected RT's at signalised intersections

PowerPoint Presentation (See 6. RT Protection Presentation.pdf):

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Right Turn Protection - Christchurch Policy Development
Phase 1 of the study

Process and Criteria development
Look at national practices
Some RCAs have historically not allowed filtering
Manukau City had the most developed set of safety criteria
Northshore City had useful volumes related criteria
National and international literature review
Some overseas warrants – efficiency based
Varying estimates of crash reduction from protection
Design standards (Austroads)

Geometry related issues

Conclusions:

Implement a lead right turn for the western Memorial Ave approach, then filtering on both approaches. This improved efficiency and provides bus priority for the bus service. Safety criteria

- Maybe 5 crashes in 5 years too high for Chch
- Need to consider pedestrian exposure better (risk)

Efficiency criteria need to be fine tuned, could be different for different road types/routes

Most cost effective approach is to treat intersections with greatest potential to reduce crashes – also meets safety targets

Phase 2 Study

Objectives:

To study RT crashes and crashes between peds and turning vehicles for each leg
To rank intersections in Chch in terms of priority for RT treatment, based on safety needs
To refine process and criteria thresholds

Data required:

Use GIS to present spatially
Crashes from CAS, but needed some manipulation
Ped volumes from IDM as proxy measure

Conclusions:

Points system for ranking gives better distribution
Proposal to combine ped and LB crashes
Initial safety thresholds too high for Chch
The results of ranking are a snapshot in time
Still need to assess efficiency at each intersection (efficiency criteria still a work in progress)
No significant safety problem associated with turning movement's issues, no options modeled improved efficiency of the intersection.

Questions

Come to any cost conclusions to fix the problem?	Look at funding, another task on their list.
Economic analysis considered?	They chose a different approach – sites with the highest crash rates. After you work through the list you would do an economic analysis. Not done yet.

Ann Fosberry

Minimum Green Time for Right Turn Phases with Predominant HCV's PowerPoint

PowerPoint Presentation (See 7. Minimum Green for RT Turn Presentation.pdf):

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SITUATION

Multilane – 4 way intersection
Westbound:
- 1 RT lane,
- 3 Thru lanes,
- 1 cycle lane

Opposing RT accessing Port log storage

ISSUE

1 truck in RT lane
Multiple vehicles in westbound thru lanes including HCV's
Minimum Green Time runs for RT
Truck is still in intersection when westbound thru get green

PROBLEM

Vehicles at stop line wait
Cyclist see green light, has no view of truck as visibility blocked by queued traffic
Left hand lane traffic see green light, view blocked by westbound HCV's

DISCUSSION

Issue identified in Post Construction Safety Audit – not addressed
Simple option – set longer minimum green, but road also accesses residential area

What are the available smart solutions?

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Possibility of a double detector?
Is there an opportunity for the vehicle to be classified before it gets there?

Tim Kirby

Median Pole Treatment - PowerPoint Presentation

PowerPoint Presentation (See 8. Collapsible Traffic Signal Pole Remit.pdf):

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COLLAPSIBLE TRAFFIC SIGNAL POLES

Damaged median poles can be expensive, disruptive and time-consuming to replace
In Wellington approx 60% of signal poles destroyed by errant vehicles are located in narrow median islands.
Estimated service life of narrow median poles is less than 10 years.

Approx 5 years ago started using baseplated poles with reflective tape for all vulnerable 100mm diameter poles.
Also began installing pre-loved QH lanterns on median poles.
Approx 3 years ago started installing poles with vertical slots just above baseplated joint and with the lower baseplates thicker than the upper ones.

Costs: Replacement cost using a standard pole with LED lanterns: approx $7,100 + GST. Replacement cost using a base plated top section of pole with recycled QH lanterns: approx $2,400 + GST.

Delays: Replacement using standard pole: approx 7 hours (9am – 4pm). Replacement using base plated top section of pole: approx 3-4 hours.

Safety: "Passive" pole which collapses and stays attached to its foundation means there is less likelihood of injury to errant vehicle occupants or other passing motorists/pedestrians. Less cost to society.

Heavy Haulage: Suits HH industry since the pole can be folded down or removed completely at low cost.

Conclusion
Collapsible poles may be of interest to RCA's who have poles that are being hit regularly and who wish to minimize repair costs & delays, and reduce injury risks to errant motorists.

Questions

Have you tried a shear based type arrangement? No cable chambers?	Yes

Bill Sissions

Controlling Traffic for opposite the stem of a Tee

Feedback:
Do you provide a signal phase?
Manukau have detector loops
Detector – ped phase
Ausie don't do anything – too many.

Traffic Signal Interface with Railway Signals

Ontrack considers 50 meters is the cut-off point. More than 50 don't worry, less than 50 – need to link.

Grant Gordon

Use of cycle advanced stop boxes

PowerPoint Presentation (See 9. Grant SNUG2008_adv_stop_boxes.pdf):

Observations on recent trends for building cycle safety into arterial upgrades and intersections

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The LTMA and GPS are bringing more focus to alternative or sustainable transport modes, including cycling.

Recent safety audits have raised concerns with some applications of cycle facilities.

There is a danger of projects including cycle features that are inappropriate, to tick off the cycle provision box

Advanced Stop Boxes are advantageous at signals to:

- put cycles in front of turning traffic, where they can be seen and claim the lane
- allow cycles a lead position so they can clear difficult situations

Problems: Inaccessible Advanced Stop Box, Downstream Catch Ups, Turning Phases, Long Left Turn lanes, Free turn lanes & Seagull islands.

Questions

Why provide cycle boxes?	They make motorist aware cyclists are using the intersection or tee.
Early start cycle areas?	Can be done if you can accurately detect cyclist. (Done in Rotorua?)

Brendon Tong

Earth Loop impedance at traffic signals.

PowerPoint Presentation (See 10. Draft_EFLI.pdf):

Ensuring Effective Earthing Measurement and Control of Earth Fault Loop Impedance at Traffic Signal Sites PowerPoint Presentation

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If the earthing system impedance restricts the amount of fault current, two issues arise:

1. A fault may not be disconnected at all.
2. A fault may not be disconnected quickly.

Consequences:

- If the fault is not disconnected at all, the exposed metalwork remains electrically alive and dangerous indefinitely (note this would normally be connected to earth and safe)
- "Slow" disconnection produces the same result until the process completes.
- Members of the public exposed to a risk of possible lethal electric shock.
- Liability under the Health & Safety Act.
- Non-compliance with AS/NZS3000 rules for electrical safety.

How do we manage it?

- Carry out testing at commissioning.
- Keep records of those tests!
- Periodically test your whole network.
- Any items that don't comply go into your forward work programme.
- Above all document what is done.

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Questions:

Don't you use earthing wire?	Earthing wire is only part of the circuit. This tests whole fault circuit.
Ongoing maintenance system?	Yes – ahead of standards currently.
Testing at each pole?	Do testing at main source and at poles.

Pete/Sergio/Brendon formed a working group to come back with a specification paper to include in national spec ASAP.

Leon Wee

Auckland Motorway Ramp Signalling Update

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Progress:

All funding approvals completed
Signed Service Level Agreement with relevant Councils
35 Ramp Signal sites completed and operating
Including four Managed Priority Lane sites
Further four sites commissioned by end of 2008
Southern, Northwestern and Northern Motorways completed by July 2009
Western Ring Route undertaken together with major projects

Goals: improve operating safety, travel time reliability & efficiency, customer satisfaction & increase throughput.

Successful outcome.

International experience shows ramp signals are able to reduce crashes by 24%

Auckland highway videos shown.

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Questions:

Ellerslie/Panmure off-ramp performance affected performance of on-ramp?	Investigation team will investigate the main cause.
Peak ramp flows dropping?	Traffic reassigning - will look at.

Ann Fosberry

Asset Management of Traffic Signals

PowerPoint Presentation (See 11. Asset Mgnmt of Traffic Signals.pdf):

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Traffic signal data
RAMM contains data on the following:

- Controllers
- Lanterns
- Pedestrian Components
- Poles
- Target Boards

Data used in analysis:

- Traffic Signal Component
- Condition
- Installation Date
- Condition Date

Uses of process

- Quickly spot missing or anomalies in data (wrong dates etc)
- Comparison of age vs. condition
- Simple overview of asset types
- Can easily compare differing rates of replacement
- Graphical illustration of budget requirements and likely forward works programme

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Questions

How did you retrieve data from RAMM?	Run scripts
How many RC's are using RAMM for signals?	It is recommended - quite a few places around the country – Auckland, Christchurch etc.

Susan McMillan

Incident Management Research Update PowerPoint presentation:

PowerPoint Presentation (See 12. Incident Modelling Susan McMillam.pdf):

University of Canterbury - Dept of Civil Engineering - PhD research project

- NZTA Research Project
  The Effectiveness of Incident Management on Network Reliability
  Stage 1 report - published
  Stage 2 research – ongoing

Background
Incident Management
Incident detection
Motorway/Arterial network
ITS
SCATS
VMS
Network Reliability
Microsimulation Modelling
Test bed for incidents
Link to SCATS with FUSE

Conclusions:
SCATS "as is"
Adapts, but not quickly
Priority not given to diversion route
SCATS operator intervention
Small improvement over SCATS "as is"
Diversions routes can be optimised with SCATS
Spare capacity on arterial network will affect effectiveness of diversion

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Discussion:

New variation to detect congestions – select own criteria – could have an alarm
Set up detectors – confirms true or false
SCATS – automated incident detection system
Research work – compare Traffic Management Software. (TMS - 2 years away)
NZTA incident management plans – could link and test?

Dan Marsh

Transport for London

PowerPoint Presentation (See 13. TfL.pdf):

Transport for London (TfL) created in 2000.

One of the largest public transport providers in the world.
Over 26 million trips made per day, 85% of which use the roads.
Of the 13,800km of road in London, TfL manages the most important 580km (TLRN).

The London Traffic Control Centre watches over London's busiest roads 24/7.

Urban Traffic Control
UTC manages traffic at approx. 3000 signal sites.
Of these 3000, 1800 are controlled via a responsive traffic management computer system and 1200 are computer controlled using fixed signal timings.

Bench Controller design diagrams shown. This controller costs 3x as much as an ordinary controller. Around £15,000 to buy a complete unit.

Questions

Can you access all sites from one location?	Yes
Do you use stop line detectors?	Yes
Have you tried an alternative detection system?	Yes – 'compact mover'. Vision detection coming – a way to go.

Axel Wilke

Staggered ped crosswalks at signalised cross intersections PowerPoint presentation:

PowerPoint Presentation (See 14. StagedPedCrossings A Wilke.pdf):

SPC Concept:
Separates crossing tasks
Allows for full (or increased) protection without (necessarily) decreasing motor vehicle efficiency
Increases pedestrian walking distances (but may decrease waiting time)
Traffic signal phasing
Operates as two separate crosswalks
Different phasing possibilities

- Depending on location of pedestrian demand
- Depending on turning movement demand

Modelling
Two ways of modelling pedestrian effects in SIDRA

- Use pedestrian volume data, or
- Define late start to conflicting vehicle movement

Second method is recommended

- In control of what SIDRA does

This requires demand and delay data

Observations & Question

Often don't have wide enough median
Large intersections get high cycle time from length of ped phases
Would ...

- Dropping a lane
- Introduction of wider median and SPC
- Shorter cycle time

... result in better intersection operation?
Are staged pedestrian crossings unsafe because they require pedestrians to wait in the centre of the road?

Conclusions

British experience suggests staged pedestrian crossings will improve safety and quality of pedestrian provision at intersections
Initial modelling suggests that intersection efficiency can be improved through proper introduction of staged pedestrian crossings
Great solution for multi lane roads
Further investigations required
Let's try it!

Discussion:

Pedestrians coming from the other direction – often don't get across fast enough.
Need to look at everyone's requirements
Take into account slow pedestrians
Site specific

Ross Thomson

Staggered vs. standard midblock crossings in a coordinated network

PowerPoint Presentation (See 15. Ross Staggered PX.pdf):

Discussion

Running a 120 seconds cycle time, staggered can be effectively introduced.
Different times depend on which way you go 165 vs. 75.
Normally, when high ped demand - high traffic
Staggered peds are good if design is acceptable
75% in Canberra are 'runners' people don't wait for the 2nd phase
Not used in Britain.
Single stage better in certain conditions
Capacity issues – over load storage capacity in the medium.

Michael Daley

Staggered Midblock Crossing Design:

PowerPoint Presentation (See 16. Staggered Pedestrian.pdf):

Discussed the history of staggered peds in Auckland with various examples.
Were used primarily to reduce vehicle delays.
Even with the development of in-ground pads, we still focussed on vehicles and not peds.
There was a need to put more emphasis on reducing ped delays, hence the SIMPED (Staggered Independent Midblock Pedestrian).
Michael then went on to describe the experiences of using the SIMPED at a site in West Auckland.
The conclusion is that the new design appears to reduce delays to both vehicles and peds.

Bill Sissons

SIMPED crossing

PowerPoint Presentation (See 17. SIMPED Crossing.pdf):

SIMPED Crossing Features

Independent Crossing Operation -
The two crossings can operate completely independently of each other, if allowed.

Pedestrian Inhibit Feature -
The two crossings can operate with an inhibit facility whereby the second crossing is inhibited from being introduced until 'safe' to do so.

Call-Ahead Feature -
An Auto Demand feature can be implemented whereby the demand for the first crossing from the kerbside button/pads will but an automatic Call-ahead demand for the second crossing after a preset delay time.

WALK Extension -
The ped pads can be allowed to extend the WALK time up to a preset maximum value.

Reduced Maximum Green Feature -
The Signal Group Maximum Green time can be reduced to a preset value if the crossing is demanded by the median side Button/Pads to reduce the pedestrian waiting time on the median.
Automatic Disabling of Ped Pads -
Ped Pads can be disabled from the SCATS keyboard or via a Variation Routine by setting the appropriate XSF bit. A stuck-on Pad can be flagged to implement this feature.

Auto-Demand Feature -
Setting the SCATS Y- will auto-demand both crossings.

Coordination of Crossings with Adjacent Intersections -
Can be achieved by inhibiting the ped demand while the appropriate XSF bit is set. In Flexilink operation, an inhibit window can be created using the R and Q pulses.

Discussion

People need notification that they need to stand on the pads

Mike Smith (MWH) presented by Bob Gibson

Illuminated Studs at pedestrian crossings

PowerPoint Presentation (See 18. Pedestrian Crossing Warning Lights M Smith.pdf):

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Pedestrian Crossing Warning Lights Making Pedestrians Safer

Concerns were expressed about pedestrian safety at three mid-block pedestrian crossings.
History of Crashes.
CCC and ACC agreed to run a combined trial of developing technology using in-pavement flashing LED studs
Trial proposal was approved by NZTA (formally LTNZ) January 2006.

Trial Objective Outcomes

Driver Stopping for pedestrians (up 5% - 21 %)
Driver compliance with limit lines (up 4% - 20 %)
Pedestrian safety perception improved (up 20% - 50%)
Conflicts reduced to near nil
Drivers are aware of pedestrian movement on crossing
Mean & 85th percentile speed - reduction indicated
Operating / maintenance cost low to date
Maintenance costs low to date
Photoelectric beam activation system proving effective
Activation system – proximity to crossing affecting activation time
Installation Cost – high if connecting to old utilities

Trial Result Improvement to Pedestrian Safety

Trial has been successful to date
Safety perception by driver / pedestrian improved
Good safety gains to date for moderate cost
Reduced number of false-positive crossings
Builds driver confidence in system
Continued monitoring recommended

Contact: accident@mwhglobal.com for copy of trial report

This idea/concept won the '3M Traffic Safety innovation' award.
LTMU Design
Where to from here? Standards? Hopefully will be an approved device.

Discussion

Additional in-road lighting systems – in the pipe line
LTSA trial – outside Wellington
Power failure – battery or solar power options

Chris Vallyon

Reducing Pedestrian Delays at Traffic Signals

PowerPoint Presentation (See 19. Pedestrian Delay Research C Vallyon.pdf):

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Amsung modelling tool used.

SNUG COMMITTEE FOR 2009

Those interested invited to be part of the group.

Committee agreed to be the same as 2008.

Ross Thomson
Ann Fosberry
Bill Sissons
Peter Evans
Paul Donegan
Bob Gibson
Hjarne Poulsen

2009 SNUG Workshop location – Nelson (Mark Hollows)

2008 SNUG meeting closed at 3.30pm. Thanks was given to sponsors for gifts, meals, and drinks. Thanks also to Tim, Brendon and Wayne for organising the venue.