TRB Annual Meeting (Conference) - Overview & Highlights

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Conference Overview

- Held each January in Washington DC
- Over 10,000 attendees
  - representation from at least 65 countries
- Over 3,000 presentations covering all aspects of Transportation
  - Aviation
  - Pavements & Materials
  - Design & Construction
  - Systems and Data Analysis
  - Environment, Energy and Climate
  - Freight Systems and Planning
  - Public transport and ferries
  - Road safety
  - Social, economic and cultural issues
  - Planning, policy and processes
  - Maintenance
  - Legal Issues
  - Management and leadership
  - Transport operations
  - Marine
  - Pedestrians and Cyclists
  - Rail
  - Security
  - Structures
  - Road users
Conference Overview

- Runs from Sunday through to Thursday, with session starting at 8am and going through to 10pm
- 600 technical sessions and workshops
- High use of poster sessions
- TRB committee and task force meetings
- Podium sessions reserved for emerging areas and invited speakers
- Spread over three hotels!
Poster Sessions

- The lifeblood of TRB (>2000 poster papers)
  - A very efficient way to see a lot of relevant info in a short time
  - Allows for one-on-one discussions with authors
  (Also a way to catch up with a lot of colleagues at their posters!)

- These are NOT the "second-class" papers
  - Have to meet the same paper review standards as podium papers
  - May be selected for TRB Research Record or win awards
TRB Committees

- >200 committee and task force meetings
  - One of two face-to-face meetings a year for most committees
  - Committee members often spend more time in committee, sub-committee and task force meetings than at the conference sessions

- Develop TRB research needs and conf session content
  - The engine room of Nth American transport research (and beyond)
Reaping the benefits of TRB

- Between 2003 and 2009 Utah DOT sent 49 individuals to TRB
- These attendees have introduced 269 initiatives, of which 136 have been currently implemented
- Utah have estimated that they have benefited so far from over $189M in cost savings from ideas picked up from TRB, in following areas:
  - Contracting method
  - Safety improvements
  - Accelerated bridge maintenance
- **Utah Conference Attendance Process**
  - Careful Selection of Attendees
  - Preparation for meeting (prior to and at TRB)
  - Each attendee looks for at least two key ideas, often many more, to bring back from the conference
  - Present ideas found at the conference to other DoT staff
  - Implement Ideas
Highway Safety Manual Update

- Prior to its development USA transport professionals did not have a national resource for quantitative information about crash analysis and evaluation.
- Using HCM as an example a TRB task force was set-up to develop the HSM in May 2000.
- Previous practice was ‘naïve’ measures such as linear crash rates and simple before and after experience at sites.
- Determined that a more rigorous set of statistically sound models were needed to screen networks for safety projects and apply appropriate countermeasures.
- Had access to some of the best crash prediction models internationally and also rigorous processes (expert panels) to select crash modifying factors for road features.
Highway Safety Manual Update

So what’s in HSM:

- Definitions and a comprehensive explanation of crash analysis & evaluation methods, including human factors assessment
- Various hotspot/blackspot selection methods (7)
- Crash prediction models (SPFs) for several major roading types – more to come in future updates
- Accident modifying factors for large number of road features. These have been carefully reviewed by expert panels. In many cases these factors are a non-linear function of traffic volume and other variables such as speed (not just simple before and after values)
- Safety performance methods – typical versus observed

HSM is due to be published this month (March) by AASHTO
Extensive training planned in US on how to use HSM
Incorporation of >US$5m of New Research:

- NCHRP 3-60 Interchange Ramp Terminals
- NCHRP 3-64 HCM Applications Guide
- NCHRP 3-65 Roundabouts in the United States
- NCHRP 3-70 Multi-Modal Arterial LOS
- NCHRP 3-75 Freeway Weaving
- NCHRP 3-79 Arterial Travel Speeds
- NCHRP 3-82 Default Values for HCM
- NCHRP 3-85 Guidelines for the Use of Alternative Traffic Analysis Tools
- NCHRP 20-7 Two-Lane Highways
- FHWA Research on Active Traffic Management
- NCHRP 3-92 supplemental research
  - Signalized Intersection Methodology (new delay method and structure changes reflecting actuated control)
  - Gap acceptance for six-lane, two-way stop-controlled Intersections
  - 75 mph speed-flow curve for freeways
Highway Capacity Manual 2010 Update

- Four volumes
  - Volume 1: Concepts
  - Volume 2: Uninterrupted Flow
  - Volume 3: Interrupted Flow
  - Volume 4: Applications Guide

- changes desired by the user community
- a more multimodal approach to addressing transportation issues
- designed to continue to be relevant to users in an age of increasing reliance on software tools
Other Conference Highlights and Info

- Key highlights
  - Paper Sessions
    - Mon-Thu 8am to 10pm
  - Committees & Workshops
    - Includes prior weekend
  - Receptions
    - 5am - 8pm
  - Exhibition
    - Mon-Wed

- Important to plan your time:
  - many topics
  - time to meet people
Conclusions

More Kiwis should try and get to TRB once-off and regularly:

- Bring home cutting edge research findings and new applications
- Establish international peer networks and original sources
- Contribute to the world-wide profession
- Professional skills development
See you there in 2011 ?!