

Scan Trip on *Traffic Incident Response*

April 2005



England
Germany
Netherlands
Sweden

Sponsors:
FHWA, AASHTO, NCHRP

Scan Trip Concept

- Convene a team of experts
- Send team to selected countries
- Identify technologies/practices that might have immediate or near-term implementation value in the U.S.



Incident Response

- 50-60% of congestion is non-recurring
- Incident management is receiving greater attention
 - *National Traffic Incident Management Coalition*
- Improving response effectiveness benefits safety and mobility



TIR Scan Trip

- **Traffic Incident Response (TIR)**
- **Major issues of interest**
 - *Pre-incident planning*
 - *Organizational response & on-scene operations*
 - *Incident responder & activity coordination*
 - *Tools, systems, and communication technologies*
 - *Incident response resource management & administration*
- **Trip objective**
 - *Examine programs and practices that provide coordinated response to traffic incidents*

TIR Team



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David Helman, Mike Zezeski, Ron Moore*

Representing: FHWA, state DOT, fire, police,
medical, trucking, and research perspectives

Locations Visited

- Countries & cities

- *England*

- Birmingham

- *Germany*

- Ahrweiler, Cologne, Bergisch-Gladbach

- *The Netherlands*

- Delft, Arnhem

- *Sweden*

- Stockholm

Two weeks in April 2005



Locations Visited

- Time frame
 - *Two weeks in April 2005*
- Countries & cities
 - *England*
 - Birmingham
 - *Germany*
 - Ahrweiler, Bonn, Cologne
 - *The Netherlands*
 - Delft, Arnhem
 - *Sweden*
 - Stockholm



TIR Trip Implementation

- Team member presentations
 - *Wide range of meetings and audiences*
- Summary report
 - *Submitted June 1*
- Final report
 - *Publication in late 2005*
- Scan Technology Implementation Plan (STIP)
 - *Coordinated with NTIMC*



Observations about Incident Response Practices

- Countries geographically compact - higher population densities
 - *Practical to implement & operate national traffic management / information centers*
 - *Countries less complex institutionally, lesser amounts of overlapping authority*
 - *Difficult to compare national practices in Europe to national practices in the U.S.*
- Generally a national leader for coordinating incident response efforts
- Service patrols provide traffic control and motorist assistance to drivers and responders
- Clear jurisdictional responsibility for the police authority responding to incidents
- Fire departments had significant resources and training relative to incident response efforts
- Medical response is typically coordinated with the fire department response
 - *Medical response might include dispatching of a doctor to scene*
- National auto clubs provide roadside repair or towing services to members
 - *Many drivers belong to an auto club*
 - *Auto club responders often able to provide roadside vehicle repairs*
 - *Auto club response vehicles often have towing capability*
- Recovery companies often contracted for incident response
 - *Required to meet minimum qualifications*
 - *Required to meet response time criteria to maintain their contract*

NTIMC

- **National Traffic Incident Management Coalition (timcoalition.org)**
- **Overreaching topics:**
 - *Programs and Institutions*
 - *On-Scene Management*
 - *Communications and Technology*
- **Topics used to organize report**

Programs and Institutional Issues

- **Recommendations on:**
 - *National Incident Response Policy*
 - *On-Scene Working Relationship of Incident Responders*
 - *Performance Measures*
 - *Training*
 - *Auto Clubs*



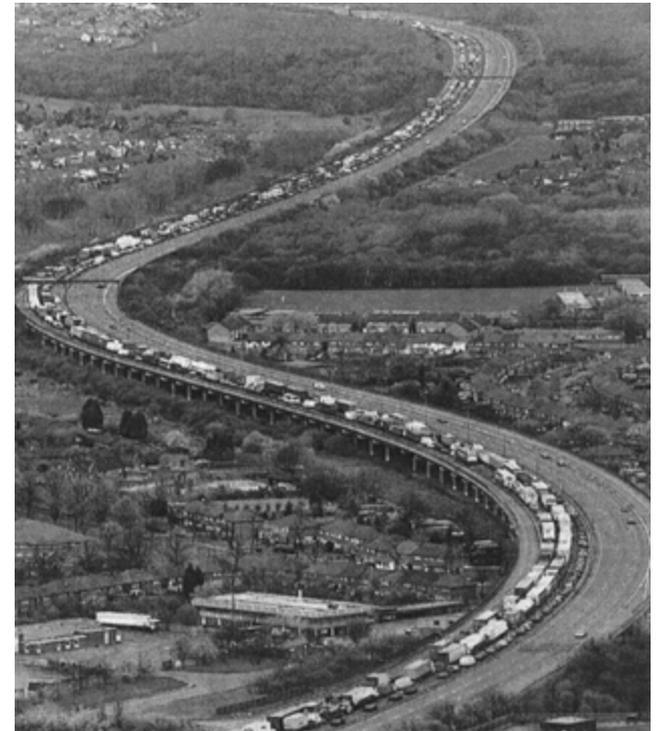
National Incident Response Policy

- **Develop and adopt a national policy for incident response that addresses:**
 - ***Safety of responders & traveling public***
 - ***Recognize improvement to safety & travel time reliability from better incident management***
 - ***Improved traveler information to the public***
 - ***Integrated communications between responders***

Netherlands Safety Priority

Netherlands priority for handling incidents:

- 1. Worker's safety*
- 2. Traffic safety*
- 3. Assistance to victims*
- 4. Maintaining flow*
- 5. Salvaging cargo/vehicle*



Relationship of Incident Responders

- **Incident response agencies should adopt formal agreements between response agencies that are:**
 - ***Incorporated into day-to-day operations***
 - ***Integrated into training programs & included in regular rehearsals for incident response scenarios***
 - ***The subject of ongoing joint planning***
 - ***Addressed as part of the debriefing activities of individual incidents***

Partnerships in England

Regional Control Center



Police



Partnerships



Traffic Officer



Incident Support Unit

Performance Measures

- **Develop guidance on performance measures:**
 - *Can be used by local & regional stakeholders to assess programs*
 - *Accounts for regional variations*
 - *Establishes basic minimum criteria*
 - *Funding to support meeting criteria*

Training

- **All incident responders should receive training in incident safety and first aid**
- **Stakeholders should conduct regular and coordinated training**
 - *Apply across agencies and jurisdictions*
- **Integrate road incidents into training for all responders**
- **Develop certification and accreditation to improve accountability**

Auto Clubs

- **Identify ways that auto clubs can contribute to quick clearance of incidents**



Auto Club Assistance

- **Auto Clubs play important role**
 - *Repair gear*
 - *Computer diagnostics*



Tactical and On-Scene Operations

- **Recommendations on:**
 - *Incident Responders*
 - *Clearance Practices*
 - *Tactical Considerations*
 - *Dispatch Practices*
 - *Response Times*
 - *Road Users Upstream of Incident*



Safety of Responders and Users

- **Develop national guidelines on:**
 - ***High visibility garments***
 - ***Buffer zones***
 - ***Response vehicle positioning***
 - ***Vehicle lighting and marking***



Vehicle Livery



Vehicle Definition

- **Retroreflective dots used to define the shape of the vehicle at night**



Response Vehicle Enhancements

- **Extra seats to accommodate victims**
- **Swivel seats in EMS vehicles**
- **Use of motorcycles**



Clearance Practices

- Recommended clearance time targets
- Spilled cargo clearance vs salvage
- Quicker clearance of deceased victims



Incident Command

- **Advance tactical plans to promote consistency regardless of lead responder**
- **Identify commanders and command vehicles on-scene**
- **On-scene meetings at beginning of incident**



Dispatch and Response

- **Simultaneous dispatch of first responders**
- **Pre-planned response assignments**
- **Response time guidelines**



Communications and Technology

- **Traffic Management and Information Centers**
 - *Implement traffic information centers on national, state, and/or regional basis*
- **Communication Practices**
 - *Incorporate towing, recovery, and auto clubs into dispatch and TMC operations where appropriate*



Neat Stuff

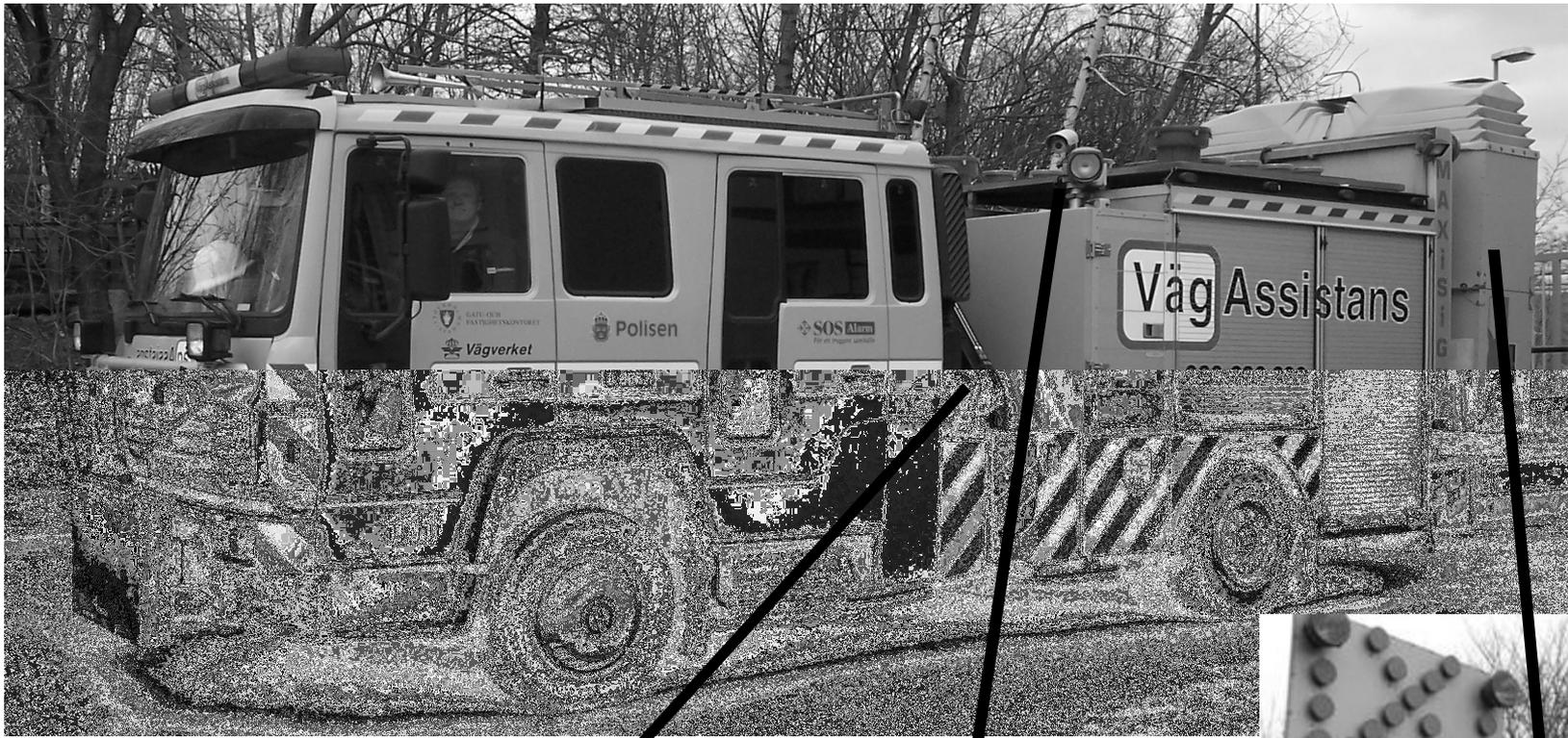
- Team saw several interesting or potentially useful practices
- These practices are not a part of the team's recommendations



Swedish Road Administration Service Patrol Vehicle

- Rear seat to accommodate passengers
- Truck mounted attenuator
- Small crane
- Real-time video camera





Motorcycle Use

- Dutch roadside assistance (auto club)
- Sweden looking at motorcycle with foldable car trailer



Portable Lighting

- **Powermoon**
 - *Portable lighting unit*
 - *Provide scene lighting*
 - *Reduces the glare for approaching vehicles.*
 - *(www.powermoon.de)*



Automated Enforcement

- Automated enforcement widely used
 - *Red light running cameras*
 - *Speed cameras*



Medical Services

- **Ambulance cots**
 - *With hydraulic mount - enables cot tilt & one person operation*
 - *Studier*
- **Wheeled chair for transport (similar to stair-chair)**
 - *Used for vast majority of patient transports*

Fire Response Equipment

- **Firexpress**
 - *Uses small water droplets combined with foam*
 - *Low pressure, portable, minimal water*
 - *Safe for humans*
- **Guidance for locating cutting points on vehicles for extraction equipment**
 - *Software - specific to individual vehicle designs*
 - *Addresses: airbag gas cartridges, airbag sensors, belt pretensioners, batteries in hybrids, electrical hazards, strengthened materials, etc.*



Training

- **Virtual reality (augmented reality) training used in Netherlands**
 - *Provides realistic scenarios*
 - *Coordinates all types of responders*



Questions ???



Not included

- EMS personnel would use cell phone cameras to send pictures of crashed vehicles and perhaps their occupants (patients coming to the hospital) to emergency rooms to better inform hospital personnel of the forces exerted on the patients.
- Sweden has the capability to impact the speed of vehicles (that have specific equipment) through a GPS system that compares the vehicle's speed to the posted speed limit.
- Automated number plate (license plate) recognition is used to develop travel time data in some countries. Detail for the final report from Helman: License plates in Europe are also more uniform than in the US and probably better able to be read by ANPR equipment.)
- Some countries use short-term travel time prediction algorithms to provide travelers with predicted travel times.
- There is a large volunteer effort in Germany that can be involved in responses to major incidents. The assistance may be on-scene by providing power, lighting, and other support services, or may be directed at the welfare of road users stuck in a long-duration queue.