



Dynamic Traffic Management

An overview by Frans Middelham

Problems

- Congestion Costs are 0.8 M€ per year
- Accessibility of Main ports
- Threat to:
 - Distribution function
 - Jobs and Economy
 - Environment
 - Safety

Policy Goals and Objectives



- Stronger economy by improving accessibility
- Enabling traffic & transport growth
- Reliable and predictable door-to-door accessibility
- Innovation is a must
- Rapid elimination of maintenance backlogs
- Road pricing necessary

Dynamic Traffic Management

- Motorway Signalling
- Ramp Metering
- Dynamic Route Information
- Information Measures
- New Developments

Motorway Signalling Systems since 1981

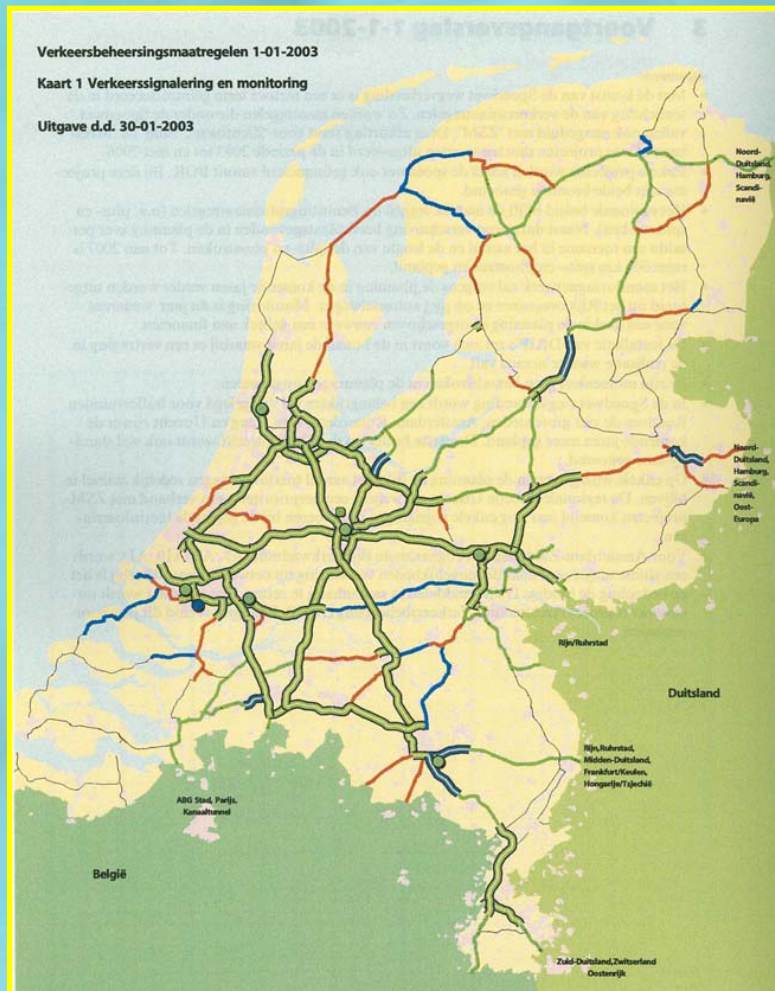


Motorway Signalling Systems since 1981



- For:
 - lane closures near incidents and road works
 - queue tail warning and protection
 - special lane signalling
- Throughput:
 - increased with 4-5 %
- Safety assessment (1983):
 - increased stability of traffic streams
 - overall decrease of accidents with 15-25%
 - decrease of secondary accidents with 40-50 %
- Safety assessment (1996):
 - confirmation of earlier results

Motorway Signalling Systems since 1981



Until 1993	242,1 km
1994	6,2 km
1995	63,1 km
1996	116,0 km
1997	190,8 km
1998	174,4 km
1999	167,8 km
2000	22,9 km
2001	0,0 km
2002	2,0 km
2003	12,0 km
2004	0,0 km
Total	997,3 km
Planned	61,0 km

Ramp Metering since 1989



Ramp Metering since 1989



- For:
 - alleviate motorway congestion
 - better merging
 - discouraging of 'rat running'
- Several assessment studies:
 - Increase of speed on motorways
 - Major reduction of shockwaves
 - Capacity increase 0-5%
 - Substantial reduction of 'rat-runners'
 - Less accidents presumable but not explicitly monitored

Dynamic Route Information Panels since 1990



Dynamic Route Information Panels since 1990



- For:
 - on route information
 - major incident information and response
- Several assessment studies:
 - In 'normal' conditions, 8-10% of drivers reacts on information
 - Network performance may increase with 0-5%
 - Drivers satisfied, more comfort, less stress
- Different implementations and tests:
 - Queue length
 - Traveltime
 - Graphical

Rush-hour Lane (hard shoulder)



Plus Lane (small left lane, lower speed)



Handbook

