Department for Regional Development (NI)

ROADS SERVICE

Traffic and Travel

Intelligent Transport Systems

in

Northern Ireland

Brian Maxwell, Roads Service.
Key Transportation Corridors
OUTLINE OF THE PRESENTATION

• traffic control in the urban network
• traffic control on the motorways
• traffic information services
• incident management
• European projects - EASYWAY
• Some challenges for the future
TRAFFIC CONTROL
IN THE
URBAN NETWORK
Roads Service operates and maintains approx:

- 480 Traffic signalled junctions
- 475 Controlled Crossings – Pelicans, Puffins & Toucans

85% of all traffic signals and controlled crossings are electronically monitored for faults from central computers.
Commissioning an early traffic signalled junction in Belfast
Many competing priorities, eg

- Throughput of traffic
- Priority for public transport
- Providing for pedestrians
- Providing for cyclists
- Providing for commercial traffic
- Improvement in air quality
- Minimise delay and congestion.
- Parking of vehicles and Clearways
- The economy of our towns & cities

Traffic Control in the Urban Network
Tactile Cone to help visually impaired

Wide pedestrian crossings

Controlled Crossings – Pelicans, Puffins & Toucans
Priority Lane for Public Transport in Belfast
Bus Gate – Donegal Square South in Belfast
Bus Gate – Donegal Square South, Belfast
Bus Gate in East Bridge Street, Belfast
Bus Priority Using GPS Technology
Traffic Information & Control Centre (TICC)
Urban Traffic Control (UTC) & SCOOT
Urban Traffic Control in Belfast

Using the latest technology to manage the Road Network

- SCOOT / Urban Traffic Control (UTC) & UTMC
- Integrated Urban / Motorway Traffic Control System
- MOVA – dynamic traffic control for isolated junctions
- Remote Monitoring of traffic control equipment
- Incident Detection (MIDAS)
- Automatic Number Plate Recognition (ANPR)
- CCTV traffic flow monitoring and Air Quality
- Driver / Travel Information, Bustrak, Car Park information
£60m roadlink passes its first peak-time test with 3,500 motorists

8am ... the rush is on

By Marie Hill

THE Department of the Environment said it was "well satisfied" after the first rush-hour on the new M3 bridge in Belfast passed off without incident today.

Dennis and a half thousand motorists an hour used the eighteen-lane, £60m bridge during the peak period, significantly reducing traffic on the Queen Elizabeth and Queen's bridges.

Belfast Divisional Roads Manager, Graham Furrey, said the smooth running was pleasing.

The road was opened for public use in May to help ease traffic congestion during the two years of closures for the construction of the new £60m bridge.

"Problems"

"At its peak between 7am and 9am, about 3,500 motorists used the new bridge, which meant remarkably lower using the other two," Mr Furrey said.

There were some slight problems at Clongore Street with motorists heading for the city centre ending up on the motorway, drivers coming in from the Dargedale direction using the off-slip at Bridge End.

"Traffic signals should sort those problems out," Mr Furrey said.

Belfast Traffic Control Centre in the Harbour Estate were able to send staff to assist motorists on the M3 about high winds.

For the first time, we were able to flash up 35mph maximum on the M3 gantries to warn drivers of the high speed," he said.

1995 – opening of M3 Lagan Bridge
Fibre and Copper communications infrastructure along the motorway network

Emergency telephones
Improving road safety – protecting back of queue

M1 – 61% severity rate reduction
M2 – 32% severity rate reduction
Hardshoulder busways on M1 and M2 motorways.

ITS camera technology and Variable Message Signs.
Journey Time Estimation using ANPR Cameras
- Journey times
- CCTV monitoring
- Incident detection
- VMS
- Travel Information
- Data exchange between Control Centres

INSTANT – NRA/ROADS SERVICE JOINT PROJECT
Network of Electronic Variable Message Signs on main approaches to the bridge – sign displays depend on measured wind speeds.
M1/Westlink Traffic Control System

Variable Mandatory Speed Limits
SET UP ROAD SIGNS; PUT UP GUIDEPOSTS, TAKE NOTE OF THE HIGHWAY, THE ROAD THAT YOU TAKE.

Jeremiah Ch 31 v 21

(626 BC !)
Information to the driver
Road Safety Messages

NEVER EVER DRINK AND DRIVE

KILL THE CALL BEFORE IT KILLS YOU

A 49
6
1m
Real Time Bus Passenger Information
INCIDENT MANAGEMENT
Management of Incidents
EUROPEAN PROJECTS
There are 8 Euro-Regional projects involved, including STREETWISE.


EU have published an ITS Action Plan and an EU ITS Directive. The EU’s view is there should be a faster roll out of ITS facilities across all Member States.

Currently EU have issued a new call for ITS projects.
Cross Border Project

Traffic Monitoring and Information on the Belfast to Dublin road corridor.

(part funded by INTERREG III programme)
DEVELOPMENTS WITHIN EUROPE

Networking of Traffic Control Centres for the exchange of traffic and travel information and the management of incidents.

Continuous monitoring of the network to detect incidents, protect queueing traffic, and to inform drivers of prevailing traffic conditions.
SOME CHALLENGES
Emerging Rapid Transit Proposals

Provision of priority at traffic signals and Real Time Passenger Information
MANAGEMENT AND ACCESS OF DATA

• Traffic Operator Common Interface
• Data Warehouse
• Library of traffic control strategies

Travel Information
Journey times
Remote access from other offices
CCTV images
Traffic counts & Annual Census
Urban Traffic Control/Scoot information
Motorway incidents & traffic flows
Management of Congestion

Managed Motorways/ All Lanes Running

40% Saving in cost over motorway widening
SIGNIFICANT EVENTS:

G8 – June
World Police and Fire Games - August
Derry/Londonderry City of Culture – January to December
And Finally ....