British Science Festival
visit to
Surrey County Council’s
Network Management & Information Centre

WELCOME

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British Science Festival, 8th September, 2009
Housekeeping

- Fire evacuation
- Loos
- Operational centre
The Event

- Introductory presentation
- Tour of Control Room
- Safety Camera Partnership
- Exhibition
- Staff on hand to answer questions
- Departure
The NMIC

♦ Key objectives: to make the best use of Intelligent Transport Systems in order to:
  – manage the highway network so that it operates as efficiently as possible;
  – provide up-to-date and reliable information

♦ Statutory duties:
  – Civil Contingencies Act (2004)
Intelligent Transport Systems

♦ Definition

♦ Systems Surrey use
Signal population

- 248 signal junction, 75 within 11 UTC areas
- 319 controller pedestrian crossings
- 60 variable message signs
- 2 air quality monitoring stations
- 32 real-time automatic traffic counters
- 7 fire station signals
- 140 school crossing wig wags
- 4 bus priority rising bollards
Common Database

- Real Time journey information
- Traffic Data
- Other Highway Authorities
- Air quality detection
- On street detection
- Web site
  - Pre-trip Information
  - Real time Information
  - Predictive Information
- Signal control plans
- Other Highway Authorities

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Communications

♦ **PSTN** (public switched telephone network) & **ISDN** (integrated services digital network) *unsuitable*

♦ **Dedicated copper-wired private circuits**

♦ **ADSL** (asymmetric digital subscriber line) — **Broadband (business)**

♦ **Fibre**

♦ **Wireless**

♦ **GPRS** (general packet radio service)
Traffic modelling & Network Management

♦ S-Paramics & SCOOTlink

(SCOOT passes signal timings based on detector flow)

(Microsimulation passes detector information based on SCOOT signal timings)

(Siemens, 2005)
Traffic modelling & Network Management

- Event management

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[图表展示2007和2008年的交通流量数据]
Travel Information

♦ Website

Real-time travel
Note: The real-time travel section is currently in development. Information provided may not be accurate.

Travel disruptions
Alerting you to travel disruptions across Surrey that may affect your journey.

Car parking
Find car park locations, total capacity, and for some car parks, the number of spaces currently available.

Buses and trains
Bus stops and some live timetables information.

Map
View car parks, bus stops, train stations, roadworks, traffic disruptions and speed restrictions.
Road safety technology

♦ Work closely with the Police & other organisations
The objective - to reduce collisions by:

- providing visible enforcement at collision hotspots;

- supported by education and publicity
Road safety technology

♦ Equipment in use:
  − red light violation cameras;
  − fixed speed cameras;
  − mobile speed camera units;
  − time over distance cameras;
  − combined red light & speed cameras
The Future

- Improved data collection and sharing
- More proactive response
- Improved up-to-date and reliable travel information
- In-vehicle communication
- Intelligent Speed Adaptation
- Roadside to vehicle communication
- Vehicle-to-vehicle communications
- and more….
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