East of England Transport Information
Report to meeting of Regional Transport Forum, 21 June 2013

1 In March 2013 I reported to the RTF that a number of public bodies
  Cambridgeshire County Council  Suffolk County Council
  Essex County Council  Department for Transport
  Northamptonshire County Council  Highways Agency
had agreed to sign a statement of intent to continue the work that had begun 3 years
previously at the instigation of the DfT. The BT Laboratory at Martlesham is key to the
collaboration, and there is active involvement also from a number of other organisations
  Aimes  Dartt
  Atkins  Felixstowe Port
  Cambridge University  Isotrak Ltd
  CTRL-Shift  Turners (Soham) Ltd
The object is to make better use of information for managing the road system and helping
drivers plan their journeys. A large and ambitious outcome is envisaged, but past
experience with IT projects suggests that the right strategy is to start with something
simple and localised and gradually add in more functions and extend the area – first to
the whole region, ultimately the whole country.
Two applications for funding have now been successful, leading to two projects to be
managed separately but closely interlocking. There is funding from DfT for up to £600k,
and from the TSB for £700k. Both are to be spent in this coming financial year. A key aim
of the two projects is to prove that there are incremental steps to wide deployment, with
each step kept small and simple.

2 Aims of the projects:
  • Focus on machine-to-machine and machine-to-infrastructure connectivity
  • Incident management
  • Continually updated information supplied to drivers using existing channels to help
    them decide their best evasion tactics for incidents along their journey path
  • Manage diversion flows
  • Feedback loop to understand consequences of incidents
  • Learn how to make better use of the media, and increase their understanding.
  • Consider methods soon to be available for transmitting information to drivers,
    including TV White space (BT has installed a trial network around Ipswich).
  • Consider how to gather more information about traffic flows on LTA roads, including
    use of novel sensing methods
  • Look at EU protocols, with a view to future TEN-T applications.

3 TSB project (STRIDE): leader John Davies
This project is mainly concerned with the technology to enable inputs to create outputs.
The lead partners are BT, Dartt, CTRL-Shift, Cambridge University, Aimes (which will host
the information hub).
• The project covers the whole of the East of England, including the A12. It should also look at the work that Suffolk is doing with the Highways Agency on the A11.
• It will gather data onto the information hub and develop applications. These include better planning of tomorrow's journeys by making use of information about known unusual conditions (for example from ELGIN or the Met Office), extending journey-time prediction to the urban environment, providing real-time passenger information, and studying driver behaviour using the BT fleet.
• Attention will be paid to how to get different information hubs to inter-operate. A particular issue is the interface between the Highways Agency and the LTAs.
• Others are invited to provide input data, particularly Cambridgeshire.
• The project will seek to understand the needs of stakeholders, identify problems with exchanging information and value chains, and learn how to convince organisations that it is worth their while to collaborate.
• Attention will be paid to privacy implications, and liability.
• Social media will be used to some extent, to gather information and alert road users.
• BT will provide cross-fertilisation with another TSB project, coordinated by Aimes, which will focus on providing "last-mile" information for port users, particularly Liverpool

4 DfT project: leader Peter Landshoff

This project will use the Cambridgeshire part of the A14, and the roads affecting it or affected by it, to investigate the ubiquitous connectivity of everything, large or small. The lead partners are BT, Cambridgeshire, DfT and HA. The project will study how to make a road work better under normal conditions, help to alleviate problems before the major A14 upgrade scheme is completed, and assess what should be built into future roads.

• map the existing information and capture whether it is formal or informal, real-time or archived, or relates to planned or forecast events
• assess its quality for different uses
• test social media harvesting for control functions
• identify gaps and how to rectify them
• map technical architectures that exist and define a target architecture for an idealised information business process
• investigate tools to filter information and to alert those from whom action is required
• consider issues including ownership, format, content, exchange mechanisms, conditions of sharing and re-use.
• create a system for automatic exchange of continually-updated information, all to be accessible in a single location
• tag the information to provide different levels of access and flag up when a decision is needed from a particular user, with an acknowledgment process
• guard against information overload
• consider how information is used: when it should control, and when just influence, who should usefully receive it
• consider how incidents are managed: who should be responsible for what, and what can be done to lessen their impact (both HA and LTA roads will be covered)
• particular attention will be given to improving existing HA and Cambridgeshire processes, including VMS, and what future technology will make possible
• external players will be invited to suggest applications
• stakeholders will be consulted about what they would like to see provided in 2018
• The architecture that will be adopted will be that of MAIT/DEIT (see http://standards.data.gov.uk/challenge/multi-agency-incident-transfer.

Each organisation defines its rules for who can see which parts of the information that it transmits to the hub, and what it will subscribe to.
• Information will be continually updated as knowledge increases, and collected together so as to allow users a picture of the state of the incident. For example it might include colour-coded maps indicating traffic flows along with labelling of incident information.

Peter Landshoff
June 2013