

‘Decisions and Data’

2017JCT Paper

Nigel Fairfield – Sept 2017

dynniq

energising
mobility



Vision

We help to manage energy and mobility flows in our society through advanced technology solutions.

We enable safe, sustainable and efficient movement of people, data and goods.

We focus on integrated solutions designed, implemented and maintained based on a sound systems engineering approach. Delivered by experienced and skilled professionals.

We engage with our clients in reliable, open and pro-active way.

We take a seat in your world

‘Decisions and Data’

**Exposing the vast amount of data that could
be used to make decisions**

With the improvements in reliability and speed of internet based communications along with the relative reduction in cost, it has become feasible to use disparate data in traffic decision making

Decisions and Data

Background

Definition

decision

dɪ'sɪʒ(ə)n/

noun

a conclusion or resolution reached after consideration

Decisions and Data

Background

Traditional UTC Decisions

- Luxury of Timetabled Timings on your signalised junctions
- Luxury of Coordination between your signalised junctions
- Luxury of an adaptive algorithm on your controlled network such as SCOOT
- Luxury of a CCTV system
- Luxury of historic traffic data such as ASTRID

So what is the problem?

Decisions and Data



Decisions and Data



Man eaten by
Lion!

ANGER!

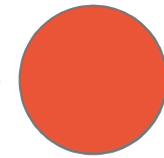
Run away!



Data



Insight



Action

Decisions and Data

Current Situation

Data you may already have:

- Traffic Count and Classification Data
- Journey Time Data
- Weather Data
- SCOOT Data
 - Could be modelling Flow and Occupancy
 - Could be modelling Speed
 - Could be modelling Air Quality

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Making More of what you have

A little effort is required

- Accurate Definition of Network
- Adaptive Viable
- Add in the 'Extra' Details
- You can model without control
- Compare and Contrast Different Data Sources
- Eyes – Local Knowledge - Experience

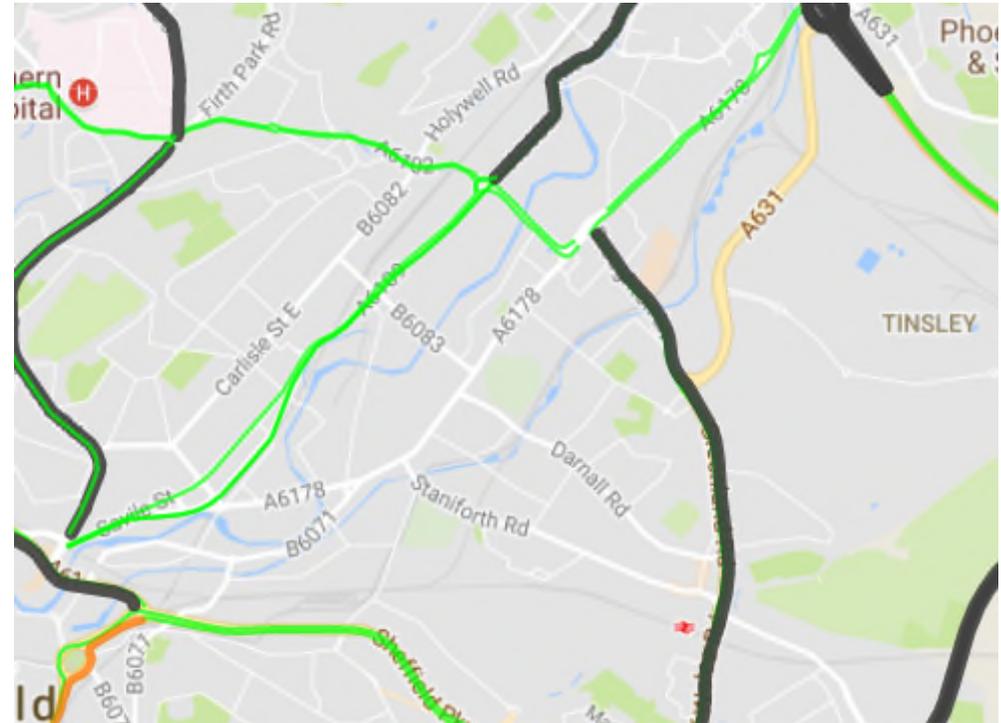


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What Else is Available Now?

Not Just a phone call

- Highways England & Traffic Scotland
- Public Transport
- Air Quality
- 'Crowd Source'
- Football Seasons Fixture List
- Weather Forecasting
- Planned Works



Decisions & Data

So How Can You Use the Data

Software Skills a bit Rusty?

- Powerful Graphical Tools
- Different & Diverse Unrelated Data Sources
- Decisions Can be Applied to Unrelated Objects – Not Just Alerts
- Decision Triggers no longer need to be fixed
- The normal is learnt and decisions made on straying outside the expected



Decisions & Data

Strategy designer for: SCA JT Email test

The screenshot displays a strategy designer interface for a test named "SCA JT Email test". The main workspace contains a flowchart with three nodes:

- Situation Node:** A box labeled "journey time above mean" with a green dot at the bottom and a red dot on the right side.
- Response Node (Left):** A box labeled "message if above mean" with a white dot at the top and a green dot at the bottom.
- Response Node (Right):** A box labeled "not above mean" with a white dot at the top and a green dot at the bottom.

Flow lines connect the Situation node to both Response nodes. A vertical line separates the two Response nodes.

On the right side, there is a configuration panel for the selected Situation node:

- Name:** journey time above mean
- Description:** (Empty text area)
- Display conditions instead of name
- Active time: 0 Minutes
- Condition mode:** All Any
- Conditions:** A list containing "GJT1 duration Above profile (mean) 57433 10 %".

Decisions and Data

What Does the Future Hold?

Sharing the Data and Closing the Loop

- New Feeds could be Data Sources & Influences on Decision Making
- Twitter – Monitor activity to detect a issue – share to influence
- Fleet Management – Data In such as refuse collection timetable and tracking – share to improve
- Knowing the Affects of a Incident and acting on Predictions of that recurring
- Social Media and Internet Activity
- Home and Workplace - Heating & Lighting Management Systems
- Corporative – Data from the vehicle – Influence – Direct or Indirect

Thank you for your attention.

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