

Introduction to SATURN - Course Outline

A 3 day introductory training course for either new and/or inexperienced users wishing to understand more about SATURN and its practical applications.

Introduction

- What is Transport Modelling?
- SATURN Basics and typical applications
- Department for Transport's Guidance, WebTAG

Understanding SATURN Networks

- SATURN network structure (structure of dat files)
- Source of network and conversion to SATURN format
- Parameters
- Buffer network and its components
- Simulation Network – node type, data structure, components
- Centroid Connectors – examining the different options available
- Other Data cards – bus flows, counts, penalties and bans

Building a SATURN Network

- Creating a Buffer Network
- Coding Simulation junctions (using SatCoder and PMAKE)
- Coding of Centroid connectors
- Turn bans and tolls
- Coordinates, bus routes and count data
- Generalised Cost and Matrix weights
- Check Network errors – LPN files
- Introduction to SatCoder
- Coding Simulation Junctions using SatCoder
- How to Check Junction Coding

Matrix Building

- Data Sources for Travel Demand
- Conversion to SATURN format
- Using MX – manipulation options, stacking, unstacking, factoring, sectoring
- Control files

Assignment and Convergence

- Highway Assignment
- SATURN's strengths including:
Blocking back, downstream flow metering and cyclic flow profiles
- Convergence – why, guidance & best practice

Model Outputs

- Model outputs using P1X and SatView
- SATDB and SATLOOK
- Extracting Summary Statistics using SATSTAT

Investigating Traffic Impacts

- Assessing the traffic impact of a Small Local Development Scheme

Extras

- Cordoning
- Advanced options – SATPIJA / SATME, SIGOPT
- Using Control / Batch Files