Department for Transport Appraisal Software

Presentation to the 2013 SATURN User Group Meeting

Thursday 28th November 2013

Ian Wright

Atkins Limited

Plan Design Enable

TWID Software: Overview

- Provision of support, maintenance and development for the DfT's appraisal software

- Undertaken by Atkins on behalf of the Department

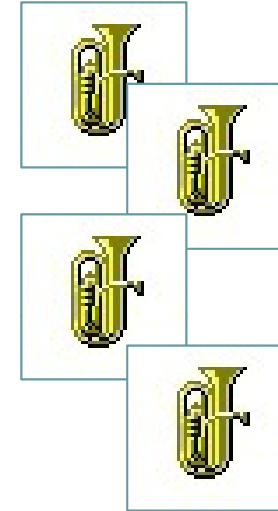- Software applications:
  - TUBA
  - WITA
  - INCA
  - DIADEM

TWID Software: Current Status

Software	TUBA	WITA	~~INCA~~	DIADEM
Current Version:	1.9.2	1.1 Beta	*~~4.2~~*	5.0
Date of Last Release:	November 2013	Not formally released	*~~December 2013~~*	February 2011
Recent changes:	See overleaf	**64-bit OS compatibility**	*~~Withdrawn March 2013~~*	**DIADEM 64-bit now available**
Future developments:	**TUBA 64-bit**	Under discussions with DfT	Replaced by MyRIAD **Supported by HA**	Maintenance only
Contact details:	tuba@atkinsglobal.com ~~inca@atkinsglobal.com~~	wita@atkinsglobal.com diadem@atkinsglobal.com		

TWID Software: TUBA Updates (i)
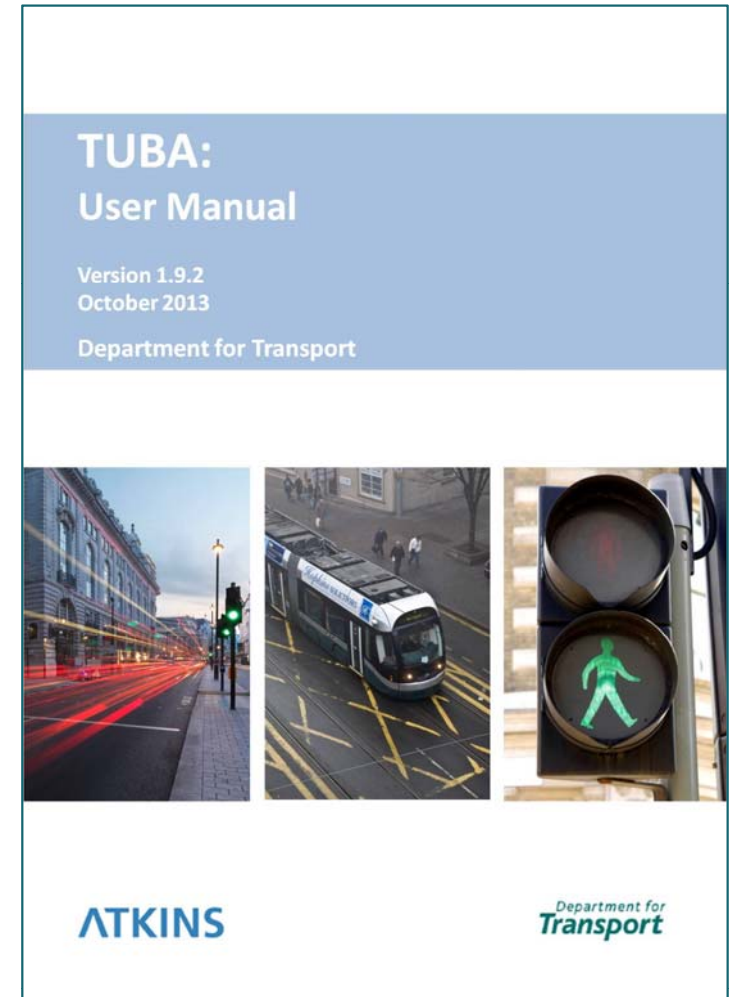
Recent TUBA Revisions

- Version 1.9 Release (September 2012)
  - Move to 2010 base year / prices
  - Update for TAG Unit 3.5.6 and 3.3.5 (August 2012)
  - Addition of electric vehicles (& fuel type)
  - Carbon split into traded and untraded values

- Version 1.9.1 Release (March 2013)
  - Emissions input/output undertaken for CO2e rather than carbon
  - Minor revisions to the economics parameter file values
  - More robust HTML export routine
  - Additional checks on Fleet proportion and growth input data
  - New Matrix and Memory checks undertaken before running
  - Compatibility with 64-bit Operating Systems
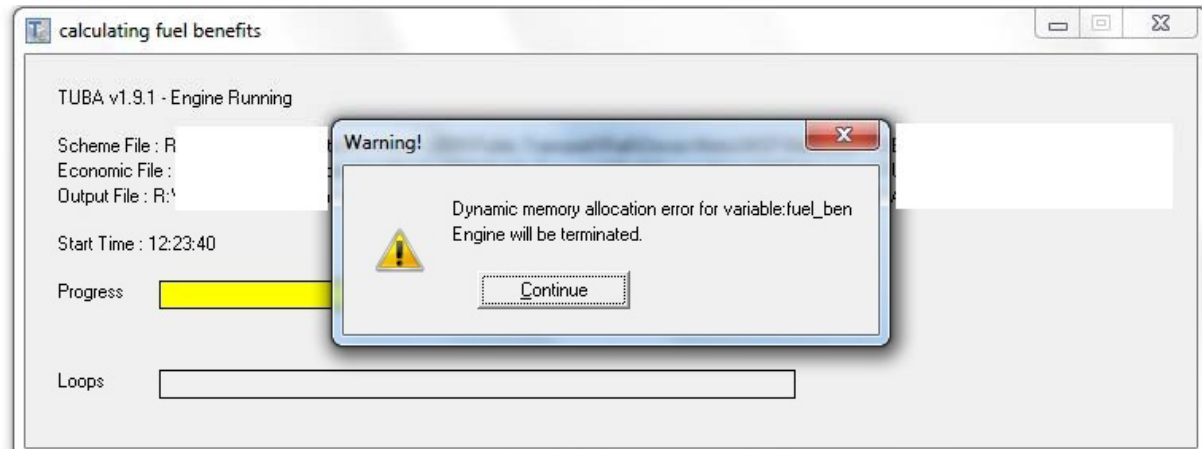
TWID Software: TUBA Updates (ii)

Latest TUBA Revisions

- Version 1.9.2 Release (Nov'13)
  - A large number of (minor) bug fixes (see release notes)
  - Updated economics parameter file
    - Linear rather than exponential growth in the VoT Growth in the monetary values of the CO_2e over time
    - Increased # of decimal places

- TAG Unit 3.5.6
  - TUBA v1.9.2 consistent with Oct'12 release
  - New DRAFT version released in Nov
  - A new economics file will be released once adopted by DfT (Jan'14)

TUBA:
User Manual

Version 1.9.2
October 2013

Department for Transport

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TUBA Memory Problems

#1 Support issue

- Uses dynamic memory management to hold ALL data in memory
- No guarantee that sufficient free contiguous memory is available
- Large(-ish) models require >1Gb RAM

A more frequent occurrence:

- TUBA v1.9.x requires more RAM than earlier versions
- Windows XP provides more free contiguous memory than Windows 7
- User Manual Section 3.9 provides more practical advice
  - E.g. One User Class at a time, separate time period

Under development:

- New TUBA 64-bit engine (TUBA_ENG.EXE)
- Funded by TfL