SATURN 11.4 Release Notes (11.4.07H)

This SATURN 11.4.07H release (August 2018) is a revision to the previous 11.4.06D release (February 2018) with various logical corrections, and is provided effectively as a replacement to 11.4.06D.

Packaged with the SATURN software is the latest version of SatWin. You should **always** install the latest version of SATURN, even if you may not instantly require the latest modelling software, in order to get the latest SatWin or other important updates.

SATURN 11.4.07H is expected to provide **assignment** and **output** results **similar** to 11.4.06D but NOT numerically identical. Where assignment or analysis previously failed, the latest 11.4.07H may now run, but some of the required fixes may change numerical accuracy in the simulation in places where failure did not previously occur. As usual, we recommend that users do not mix and match outputs between the previous and this latest 11.4 releases. However, the changes should not significantly affect previous calibration work undertaken in 11.4.06D though the user is advised to re-run the assignments to check.

The principal difference between 11.4.06D (February 2018) and 11.4.07H (August 2018) is:

♦ Need to have a new SAT10KEY.DAT file

From many support cases, it has become apparent that several installations are using incorrect key files for defunct organisations or containing incorrect additional data. This change forces the use of the latest SAT10KEY.DAT file for this software. Previous versions of SATURN will run with the latest SAT10KEY.DAT.

Other changes arise from subsuming the 11.4.06 updates accumulated to August 2018 including:

♦ SATALL – various fixes to resolve divide by zero errors in the simulation (see #118, #128)

♦ SATPIJA_MC – correction to enable more than nine sub-UFP parts to be re-assembled (#121)

♦ SATME2 – correction of bug in code which also removes the occurrence of the misleading "SATURN FATAL ERROR NUMBER 308 - REPEATED O-D PAIRS IN AN INPUT .UFP FILE TO SATME2" message when that is NOT the case (#122).

♦ P1X – correction to address the problem of missing negative stacking capacities not being exported to the network DAT when dumped from P1X (#127)

♦ SATNET / SATALL – SATALL fails when using FCF (Fixed Cost-Flow Functions) assignment and the networks are structurally different (see #130)

♦ SATALL – updates to overcome (as far as we know) the intermittent problem of incomplete assignments with corrupted UFS and truncated LPT files (see #131 and guidance note in new Appendix N for more details)

♦ UFS2UFV – correction to enable UFS2UFV batch process to generate the default (full) set of data within the SatView UFV file rather than failing unless a specific data group is defined (see #132)

- SATALL / P1X / SATLOOK – If the CLIMAX option is used at all then any .UFC file created by SATUFC or any .UFO file created by SATUFO will be compromised - but the flows etc. generated by SATALL are correct. This means that any analysis options such as SLA undertaken in P1X will also be incorrect – the margin of error will be dependent on the relative contribution CLIMAX has on the network costs (and how they subsequently accumulate over the iterative path-building process). NB: any .UFC or .UFO files generated during the assignment are **not** affected. (see #133)

- SATUFC – the post-assignment process to generate the .UFC may produce different paths to the original SAVEIT=T assignment as it was not receiving the value of UNCRTS used in the equivalent process. The problem was also affected by CLIMAX and Q-node issues. Longstanding bug now resolved (see #134)

Further details are available in the App E-Latest.xlsx available under the Support FAQ section on the SATURN Website (http://www.saturnsoftware.co.uk/). Please note that the 11.4.07H release does not include any updates to the 11.4.06D User Manual published in February 2018 apart from including copies of the "live" documents relating to errors, feedback, and guidance (App E-Latest, App F and App N respectively)..

As part of the 11.4.07H release, we have published additional guidance notes as part of new Appendix N. Appendix N currently provides information on:

1. Resolving SATALL UFS LPT Hanging / Corruption

2. Advice on the SAVEIT approximation

3. Limitations arising when using UFOs for skimming with pre-11.4.07H releases

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Installers

SATURN 11.4.07H is available through separate installers for each: (i) level (e.g. 'B' or 'N4'); (ii) single or multi-core variant; and (iii) single user (i.e. USB dongle controlled) or multi-user version.

Technical Support

If you require technical support, please do not hesitate to contact us at saturnsoftware@atkinsglobal.com.

If you have any suggestions for what you would like to see in future versions of SATURN, please let us know. Please also let us know quickly of any problems you have and we will look into them.

In the meantime, we wish you a successful continuation with SATURN 11.4 and thank you for your ongoing support.

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