SATURN ELEVEN – Version 11.2.05U

This SATURN 11.2.05U release (June 2014) is a revision to the original March 2013 released 11.2.05 (internally identified as 11.2.05i) with some logical corrections, and is provided only when users meet a problem where we have identified a fix.

SATURN 11.2.05U is expected to provide **identical** numerical **assignment** results. In all SATURN test networks where the original 11.2.05i completed successfully, no differences have been found.   However, in cases where assignment or analysis previously failed, the latest 11.2.05U may run.

In such circumstances, therefore 11.2.05U can be used as a replacement for the original release, and results from the original 11.205i runs may be safely used with outputs from this version.

Though the assignment results are identical, it should be noted **there** is **one exception** in generating outputs for secondary analysis. This is the use of UFO files (either generated by setting SATUFO=T or running the SATUFO batch file) for speedier analysis. The new version 11.2.05U provides UFO files containing a **more accurate** approximation (and their creation is more resilient). Therefore, UFO files (and subsequent analysis) should **not** be mixed between the two versions - it is **strongly recommended** that **all** UFOs should be regenerated using SATUFO.

For convenience, we re-iterate the general advice from the original 11.2.05 release i:

It should be noted that the generation of UFO files introduces some further approximations in the recreated paths and there can be some differences between those created by the UFO-based and FW-based algorithms. In most cases the differences are small, but larger differences can occur that are network-specific (relating to boundary effects between buffer and simulation coding). In our testing, the differences were very localised. In well-designed networks (relative to the schemes being tested), they should be well away from the areas of interest. Users should ascertain the extent and location of the differences and whether the use of the UFO-based files would compromise the analysis undertaken. This can be done by examining the differences between the assigned demand flow and the equivalent flow resulting from using the UFO paths; these "UFO-FLOWS" are created in the SAVUFO/SATUFO process and stored in the UFS files in DA 4948. The ten biggest differences in the flows are reported in the SAVUFO/SATUFO output (LPT).

Additionally, some matrix utilities that worked in earlier versions than 11.2.05i were discovered to no longer work, though as the structure of matrices remain unchanged, earlier or later versions could provide the short term solution. The corrected versions are included herein.

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