

N. Guidance Notes

N.1 SATALL UFS LPT Hanging / Corruption

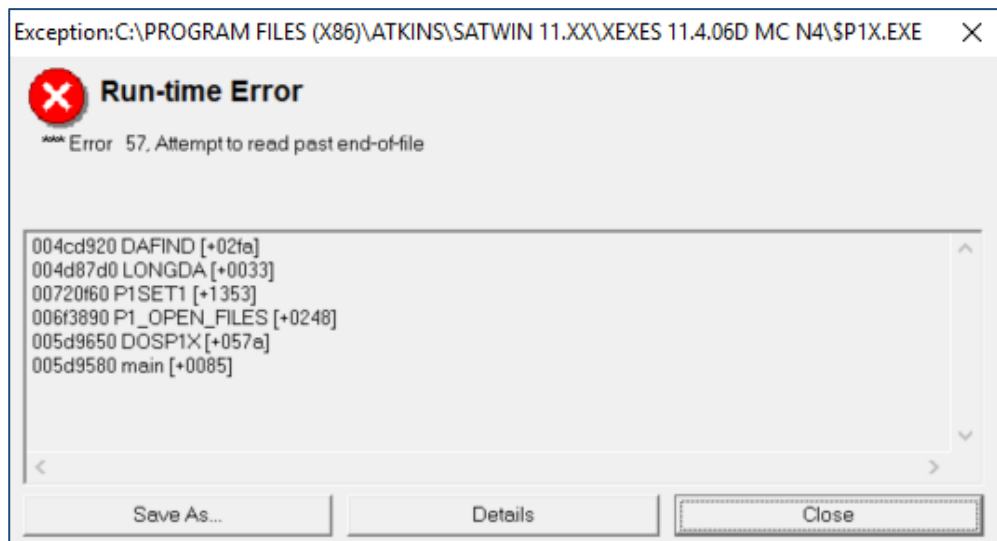
In certain circumstances, SATALL will appear to have successfully completed but subsequent attempts to access the resulting output UFS file (eg using P1X) will generate an exception error or fail to run.

It is an intermittent problem that has been very difficult to reproduce, investigate and resolve. We have now identified the source of the problem and it has been fixed we believe in the majority of circumstances from SATURN 11.4.07G onwards, with a workaround described below for earlier versions. The problem arises with the interaction of Silverfrost's Clearwin+ Graphical User Interface routines, as used by SATURN, and the Windows Operating System.

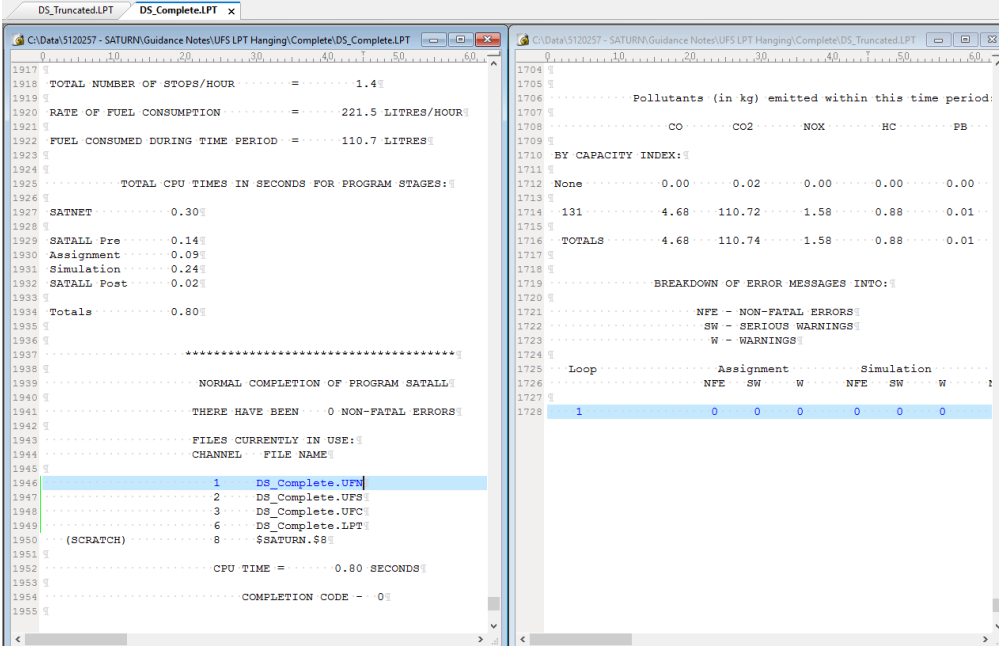
N.1.1 Examples of the Problem

Users will typically encounter the problem in one of four ways:

- 1) When trying to subsequently open or access the UFS file produced by SATALL in another software application (eg P1X or SATLOOK), a Run-time Error message is generated:



- 2) When looking at the SATALL LPT file, the file is truncated as shown on right-hand side file below:



```

1917
1918 TOTAL NUMBER OF STOPS/HOUR ..... = ..... 1.4
1919
1920 RATE OF FUEL CONSUMPTION ..... = ..... 221.5 LITRES/HOUR
1921
1922 FUEL CONSUMED DURING TIME PERIOD = ..... 110.7 LITRES
1923
1924
1925 ..... TOTAL CPU TIMES IN SECONDS FOR PROGRAM STAGES:
1926
1927 SATNET ..... 0.30
1928
1929 SATALL Pre ..... 0.14
1930 Assignment ..... 0.09
1931 Simulation ..... 0.24
1932 SATALL Post ..... 0.02
1933
1934 Totals ..... 0.80
1935
1936
1937 *****
1938
1939 ..... NORMAL COMPLETION OF PROGRAM SATALL
1940
1941 ..... THERE HAVE BEEN ..... 0 NON-FATAL ERRORS
1942
1943 ..... FILES CURRENTLY IN USE:
1944 CHANNEL FILE NAME
1945
1946 1 DS_Complete.UFN
1947 2 DS_Complete.UFS
1948 3 DS_Complete.UFC
1949 6 DS_Complete.LPT
1950 (SCRATCH) 8 $$SATURN.$$
1951
1952 ..... CPU TIME = ..... 0.80 SECONDS
1953
1954 ..... COMPLETION CODE - - 0
1955

1704
1705
1706 ..... Pollutants (in kg) emitted within this time period:
1707
1708 CO CO2 NOX HC PB
1709
1710 BY CAPACITY INDEX:
1711
1712 None ..... 0.00 ..... 0.02 ..... 0.00 ..... 0.00 ..... 0.00
1713
1714 131 ..... 4.68 ..... 110.72 ..... 1.58 ..... 0.88 ..... 0.01
1715
1716 TOTALS ..... 4.68 ..... 110.74 ..... 1.58 ..... 0.88 ..... 0.01
1717
1718
1719 ..... BREAKDOWN OF ERROR MESSAGES INTO:
1720
1721 ..... NFE - NON-FATAL ERRORS
1722 ..... SW - SERIOUS WARNINGS
1723 ..... W - WARNINGS
1724
1725 Loop Assignment Simulation
1726 NFE SW W NFE SW W
1727
1728 1 0 0 0 0 0 0

```

- 3) An unexplained crash or hang within an internal looping process (eg DIADEM-based Variable Demand Model) without any obvious failure mode. In the DIADEM instance, one of the output UFS file may have become corrupted but the problem is not immediately picked-up and DIADEM subsequently fails with an unhelpful error or simply 'hangs'.
- 4) An exception error after SATALL has tried to exit but fails to do so – this problem may still arise but we have not been able to reproduce it to date.

N.1.2 Workaround

As noted above, the problem has been fixed we believe in the majority of circumstances from SATURN 11.4.07G onwards. For earlier versions, the workaround is to change the default parameters so that the software does not use the Clearwin+ graphics libraries. This may be undertaken by either:


- 1) Setting WINDY=F in the network DAT file – this replaces the summary information panels with scrolling text windows (see section 6.3.1 of the User Manual)
- 2) Setting QUIET=T in SatWin or directly via the use of environmental variable command SET QUIET=T (see section 15.55) – this removes all on-screen reporting

Note that neither option changes the results from the assignment.

N.1.3 Support

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

N.2 Version Control

JOB NUMBER: 5165870		DOCUMENT REF: App N.doc				
Revision	Purpose / Description					
		Originated	Checked	Reviewed	Authorised	Date
10.9.10	SATURN v10.9 Release	DVV	DG	IW	IW	04/09/09
10.9.12	SATURN v10.9 Release	DVV	DG	IW	IW	22/10/09
10.9.22	Web release – Dec 10	DVV	AG	IW	IW	06/12/10
10.9.24	SATURN v10.9 Release (Full)	DVV	AG	IW	IW	06/05/11
11.1.09	SATURN v11.1 Release (Full)	DVV	AG	IW	IW	31/03/12
11.2.01	SATURN v11.2 Beta Release	DVV	JS	IW	IW	07/12/12
11.2.05	SATURN v11.2 Release (Full)	DVV	JS	IW	IW	17/03/13
11.3.03	SATURN v11.3 Release	DVV	SN	IW	IW	28/02/14
11.3.07	SATURN v11.3.07 Release	DVV	DAS	IW	IW	26/09/14
11.3.10	SATURN v11.3.10 Release	DVV	DAS	IW	IW	19/01/15
11.3.12	SATURN v11.3.12 Release	DVV	DAS	IW	IW	20/04/15
11.4.06	SATURN v11.4.06 Release	DVV	DAS	IW	IW	18/01/18
11.5.03	Pre SATURN v11.5.03 Release	IW	DAS	IW	IW	19/06/18