



tmproc

January 12, 2017

Abstract

This task reads Raw TM files and dump basic statistics about the files. Depending on the SAS verbosity, NCTRS frames statistics and packet dump statistics will be dumped.

1 Description

This task is intended for reading one single raw TM data files and dump basic information, as Frame and Packets statistics. Potentially, it will allow basic edition of the files.

2 Use

`tmproc -useS2K -strict -cachedir -rawfile -outfile`

Before calling the executable, - Set the `delays.fit` locatable for it. - Define the `TDLYFILENAME` env variable. - Set the `SAS.VERBOSITY` as needed. - Be sure the raw files are located into the cache dir.

pipeline processing	no
interactive analysis	no
Raw TM analysis	yes

3 Description

tmproc will open the required raw TM datafiles, and for those DU (NCTRS frames) with the time stamp within the entered time range,

- Datafiles info will be displayed (verbosity 4, sparse)
- DU and Frames statistics will be displayed (verbosity 5, verbose)
- Packet statistics will be displayed (verbosity 6, noisy).
- Packet dumps will be generated (verbosity 7).

In principle, both VC0 and VC7 will be dumped.



Future developments will allow basic fixing process,

- Remove bad data periods (frame based).
- Modify information about frames and packets (beware the checksums).

4 Parameters

This section documents the parameters recognized by this task (if any).

Parameter	Mand	Type	Default	Constraints
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rawfile	yes	string	none	none
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Raw TM file to analyse

outfile	yes	string	none	none
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Output Raw TM file after basic fixing process

useS2K	no	bool	no	none
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Use S2k data files

strict	no	bool	yes	none
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Abort processing when DU sizes errors are found

cachedir	no	string	/home/tcxgen/tm/rawtm/none	none
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TM Cache directory

5 Errors

This section documents warnings and errors generated by this task (if any). Note that warnings and errors can also be generated in the SAS infrastructure libraries, in which case they would not be documented here. Refer to the index of all errors and warnings available in the HTML version of the SAS documentation.

The normal run will produce some warnings and even errors, which will not prevent the report and file from being created.

No data File (*error*)

Check the entered timespan and that the required Raw TM files are located in the cache dir directory.

OBT reset (*warning*)

None.

corrective action: an OBT reset is detected because the counter does not increase as expected. It may happen that a true OBT reset is present or any Raw TM data rejection process led to the apparent OBT reset.



6 Input Files

1. delays.fit, which contain the ground station delays, both the XMCS delays and the Actual (real) delays. Not needed for the processing itself.
2. raw tm data files, as needed.

7 Output Files

1. Stdout, with verbosity details.
2. outfile, a raw TM datafile with basic fixed information.

8 Algorithm

See algorithm of stsproc task for additional information. Basically,

1. - A DU Extractor is generated, with defined start-end boundaries.
2. - A STSP Processor is generated, with defined start-end boundaries.
3. - A NCTRS Processor is generated, hanging from STSP Processor.
4. - A Packet Processor is generated, hanging from the STSP Processor.

9 Comments

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References