srec_ti_tagged(5) srec_ti_tagged(5)

NAME

srec_ti_tagged - Texas Instruments Tagged (SDSMAC) file format

DESCRIPTION

This format is also known as the TI-Tagged or TI-SDSMAC format.

This format allows binary files to be uploaded and downloaded between two computer systems, typically between a computer system (such as a PC, Macintosh, or workstation) and an emulator or evaluation board for microcontrollers and microprocessors.

The Lines

Unlike many other object formats, the lines themselves are not especially significant. The format consits of a number of *tagged* fields, and lines are composed of a series of these fields.

Tag	Description
*	Data byte.
:	End of file.
0	File header (optional).
7	Checksum.
8	Dummy checksum (ignored).
9	Address.
В	Data word.
F	End of data record.
K	Program identifier (optional).

Data Byte



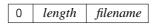
One byte of data. The nn is 8-bit big-endian hexadecimal.

End of File



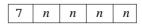
The end of data is indicated by this tag. The end of line sequence (LF on Unix systems, CRLF on PCs) follows this tag.

File Header



The optional start-of-file record begins with a tag character ('0') and a 12-character file header. The first four characters are the byte count of the file data. The remaining 8 characters are the name of the file and may be any ASCII characters, blank padded.

Checksum



The checksum is the 2s complement sum of the 8-bit ASCII values of characters, beginning with the first tag character and ending with the checksum tag character (7). The *nnnn* is 16-bit big-endian hexadecimal.

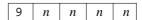
srec_ti_tagged(5) srec_ti_tagged(5)

Dummy Checksum

8	n	n	n	n
0	11	11	11	11

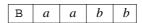
The checksum is the 2s complement sum of the 8-bit ASCII values of characters, beginning with the first tag character and ending with the checksum tag character (8). The *nnnn* is 16-bit big-endian hexadecimal.

Address



Addresses may be given for any data byte, but none is mandatory. The file begins at 0000 if no address is given before the first data field. The *nnnn* is 16-bit big-endian hexadecimal.

Data Word



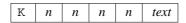
Two bytes of data. The aa and bb are each 8-bit big-endian hexadecimal.

End of Record



The end of line sequence (LF on Unix systems, CRLF on PCs) is escaped using this tag. The checksum is reset to zero at this point.

Program Identifier



The program identifier can contain a brief description of the program, or can be empty (*i.e.* the text portion is optional). The *nnnn* length (hex) of the field includes the 'K', the length and the text; it is at least 5.

Size Multiplier

In general, binary data will expand in sized by approximately 2.9 times when represented with this format.

EXAMPLE

Here is an example TI-Tagged file. It contains the data "Hello, World" to be loaded at address 0x0100.

K000590080B4865B6C6CB6F2CB2057B6F72B6C64*0A7F648F

and here is another example from the reference below

00050 7FDD4F

:

SEE ALSO

http://www.dataio.com/pdf/Manuals/Unifamily/981-0014-016.pdf (page 6-33)

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srec_cat version 1.47

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