NAME

srec_stewie – Stewie's binary file format

DESCRIPTION

If you have a URL for documentation of this format, please let me know.

Any resemblance to the Motorola S-Record is superficial, and extends only to the data records. The header records and termination records are completely different. None of the other Motorola S-Records record type are available.

The Records

All records start with an ASCII capital S character, value 0x53, followed by a type specifier byte. All records consist of binary bytes.

The Header Record

Each file starts with a fixed four byte header record.

0x53	0x30	0x30	0x33

The Data Records

Each data record consists of 5 fields. These are the type field, length field, address field, data field, and the checksum. The lines always start with a capital S character.

0x53	Type	Record Length	Address	Data	Checksum

Type   The type field is a one byte field that specifies whether the record has a two-byte address field (0x31), a three-byte address field (0x32) or a four-byte address field (0x33). The address is big-endian.

Record Length
The record length field is a one byte field that specifies the number of bytes in the record following this byte.

Address This is a 2-, 3- or 4-byte address that specifies where the data in the record is to be loaded into memory.

Data   The data field contains the executable code, memory-loadable data or descriptive information to be transferred.

Checksum
The checksum is a one byte field that represents the least significant byte of the one's complement of the sum of the values represented by the bytes making up the record's length, address, and data fields.

The Termination Record

Each file ends with a fixed two byte termination record.

0x53	0x38

Size Multiplier

In general, binary data will expand in sized by approximately 1.2 times when represented with this format.

EXAMPLE

Here is an hex-dump example file. It contains the data ''Hello, World'' to be loaded at address 0.

```
0000: 53 30 30 33 53 31 10 00 00 48 65 6C 6C 6F 2C 20  S003S1...Hello,
0010: 57 6F 72 6C 64 0A 9D 53 38                       World..S8
```

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srec_cat version 1.47

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AUTHOR

Peter Miller   E-Mail: pmiller@opensource.org.au
/\/*   WWW: http://miller.emu.id.au/pmiller/