ESOTERIC STANDARD COMMITTEE

The Esoteric Standard Committee

ESOSC-2014-A2

This standard has been approved by the following members of the ESOSC:

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1   Brainfuck

Brainfuck is a well known esoteric programming language created by Urban Mller which operates on a tape (an array of memory cells). A pointer dictates which cell on the tape a command reads or writes[1]. Different brainfuck implementations handle characters that are not commands differently. The ESOSC defines a normal form for brainfuck programs which all standard conform implementations shall accept.

2   Normalized Brainfuck

Normalized Brainfuck (NBF) defines a strict grammar to ease development of brainfuck implementations. NBF programs contain no whitespaces or comments and thus may only contain valid commands.

2.1   Normal Form

Shown below in figure [FNF] is the grammar of the normal form (NF). If a brainfuck program conforms to this grammar it is NBF conform.

```
<S> ::= <A><S> |
<A> ::= '+'|'-'|'>'|'<'|'.'|','|'['<S>']'
```

Figure 1: [FNF]

A brainfuck implementation must be able to accept brainfuck programs in normal form. Optionally it may issue a warning if it is confronted with an unnormalized brainfuck program or even reject such unnormalized brainfuck programs.

References

[1] http://de4.aminet.net/dev/lang/brainfuck-2.readme