

Release notes for Linux Kernel VFP support code

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This is the first release of the Linux Kernel VFP support code. It provides support for the exceptions bounced from VFP hardware found on ARM926EJ-S.

This release has been validated against the SoftFloat-2b library by John R. Hauser using the TestFloat-2a test suite. Details of this library and test suite can be found at:

<http://www.jhauser.us/arithmetic/SoftFloat.html>

The operations which have been tested with this package are:

- fdiv
- fsub
- fadd
- fmul
- fcmp
- fcmpe
- fcvtb
- fcvtb
- fsito
- ftosi
- fsqrt

All the above pass softfloat tests with the following exceptions:

- fadd/fsub shows some differences in the handling of +0 / -0 results when input operands differ in signs.
- the handling of underflow exceptions is slightly different. If a result underflows before rounding, but becomes a normalised number after rounding, we do not signal an underflow exception.

Other operations which have been tested by basic assembly-only tests are:

- fcpy
- fabs
- fneg
- ftoui
- ftosiz
- ftouiz

The combination operations have not been tested:

- fmac
- fmmac
- fmisc
- fmmisc
- fmmul