Open Floating Point Unit

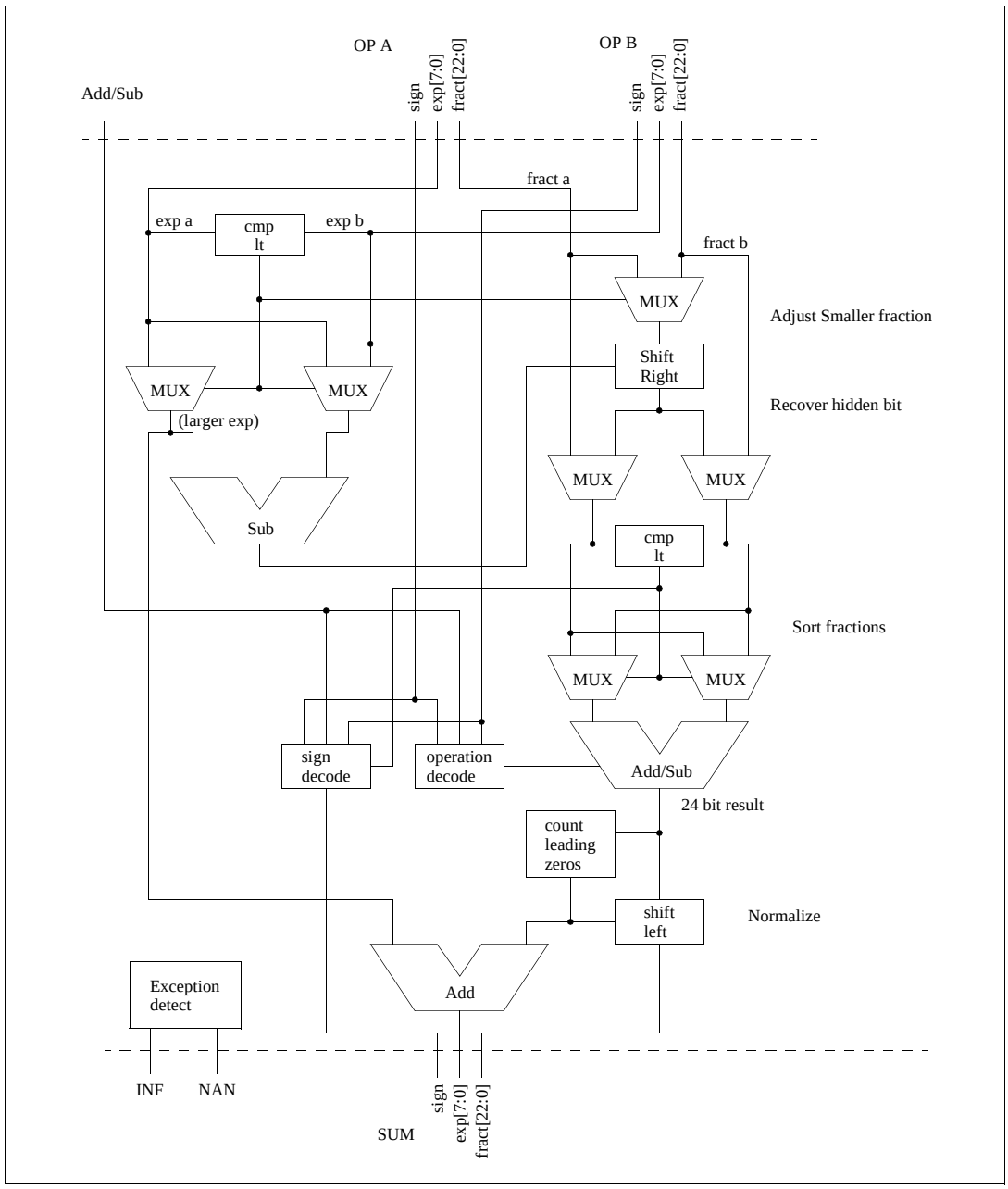
The Free IP Cores Projects
www.opencores.org

Author: Rudolf Usselmann
rudi@opencores.org

Summary:
This documents describes various building blocks for a single precision floating point unit. The minimum targeted set should include Add, Sub, Mul and Div operations.

1. FASU - A Floating Point Add/Subtract Unit

The FASU is a single precision floating point add/subtract unit.It is fully IEEE 754 compliant. Below diagram illustrates the internal of this implementation (pipeline not shown).



The only know incompatibility is that INF or NAN are signalled but might not be properly represented on the SUM output.

2. FMUL - A Floating Point Multiply Unit

3. FDIV - A Floating Point Divide Unit