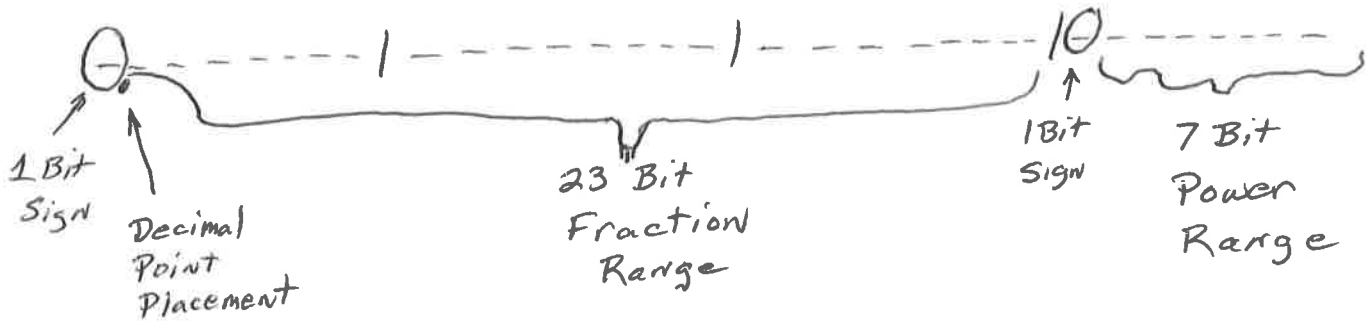
CSC/CIS Float Representation

Scaled Binary - 4Byte/32bit representation



Examples, Convert the following 48_{10}, $.09375_{10}$

$$48_{10} = 3_{10} \times 16_{10} = 11_2 \times 2^4 = .11_2 \times 2^6$$

$$.09375_{10} = 3/32 = 3_{10} \times 32_{10}^{-1} = 11_2 \times 2^{-5} = .11_2 \times 2^{-3}$$

Then

$$48_{10} = .11_2 \times 2^6 = \underline{0110\ 0000\ |\ 00000000\ |\ 00000000\ |\ 0000\ 0110}$$

$$\underline{6\ 0\ 0\ 0\ 0\ 0\ 6}_{16}$$

Next

$$.09375_{10} = .11_2 \times 2^{-3}$$

$3_{10} = 0000\ 0011_2$

$\sim 3_{10} = 1111\ 1100$

$+1 = 1111\ 1101$

So

$$.09375_{10} = .11_2 \times 2^{-3} = \underline{0110\ 0000\ |\ 0000\ 0000\ |\ 0000\ 0000\ |\ 1111\ 1101}$$

$$\underline{6\ 0\ 0\ 0\ 0\ 0\ F\ D}_{16}$$