mathieeesingbas

COLLABORATORS			
	TITLE : mathieeesingbas		
ACTION	*NAME*	*DATE*	*SIGNATURE*
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mathieeesingbas

1.1 mathieeesingbas.doc

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```

1.2 mathieeesingbas.library/IEEESPAbs

```
NAME
    IEEESPAbs -- compute absolute value of IEEE single precision argument

SYNOPSIS
      x   = IEEESPAbs(  y  );
     d0                 d0

    float   x,y;

FUNCTION
    Take the absolute value of argument y and return it to caller.

INPUTS
    y -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
```

1.3 mathieeesingbas.library/IEEESPAdd

```
NAME
    IEEESPAdd -- add one single precision IEEE number to another
```

```
SYNOPSIS
      x   = IEEESPAdd(  y  ,  z  );
     d0                d0     d1

    float   x,y,z;

FUNCTION
    Compute x = y + z in IEEE single precision.

INPUTS
    y -- IEEE single precision floating point value
    z -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
    IEEESPSub
```

1.4 mathieeesingbas.library/IEEESPCeil

```
NAME
    IEEESPCeil -- compute Ceil function of IEEE single precision number

SYNOPSIS
      x   = IEEESPCeil(  y  );
     d0                 d0

    float   x,y;

FUNCTION
    Calculate the least integer greater than or equal to x and return it.
    This identity is true.  Ceil(x) = -Floor(-x).

INPUTS
    y -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
    IEEESPFloor
```

1.5 mathieeesingbas.library/IEEESPCmp

```
NAME
    IEEESPCmp -- compare two single precision floating point numbers
```

```
SYNOPSIS
      c   = IEEESPCmp(  y  ,  z  );
      d0               d0   d1

    float   y,z;
    long    c;

FUNCTION
    Compare y with z. Set the condition codes for less, greater, or
    equal. Set return value c to -1 if y<z, or +1 if y>z, or 0 if
    y == z.

INPUTS
    y -- IEEE single precision floating point value
    z -- IEEE single precision floating point value

RESULT
   c = 1   cc = gt         for (y > z)
   c = 0   cc = eq         for (y == z)
   c = -1  cc = lt         for (y < z)

BUGS

SEE ALSO
```

1.6 mathieeesingbas.library/IEEESPDiv

```
NAME
    IEEESPDiv -- divide one single precision IEEE by another

SYNOPSIS
      x   = IEEESPDiv(  y  ,  z  );
     d0               d0    d1

    float   x,y,z;

FUNCTION
    Compute x = y / z in IEEE single precision.
    Note that the Motorola fast floating point Div routine reverses
    the order of the arguments for the C interface, although the
    dividend is still in d0 and the divisor is in d1.

INPUTS
    y -- IEEE single precision floating point value
    z -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
    IEEESPMul
```

1.7 mathieeesingbas.library/IEEESPFix

```
NAME
    IEEESPFix -- convert IEEE single float to integer

SYNOPSIS
    x   = IEEESPFix(  y  );
    d0               d0

    long    x;
    float   y;

FUNCTION
    Convert IEEE single precision argument to a 32 bit signed integer
    and return result.

INPUTS
    y -- IEEE single precision floating point value

RESULT
    if no overflow occured then return
            x -- 32 bit signed integer
    if overflow return largest +- integer
            For round to zero

BUGS

SEE ALSO
    IEEESPFlt
```

1.8 mathieeesingbas.library/IEEESPFloor

```
NAME
    IEEESPFloor -- compute Floor function of IEEE single precision number

SYNOPSIS
      x   = IEEESPFloor(  y  );
      d0                  d0

    float   x,y;

FUNCTION
    Calculate the largest integer less than or equal to x and return it.

INPUTS
    y -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
    IEEESPCeil
```

1.9 mathieeesingbas.library/IEEESPFlt

```
NAME
    IEEESPFlt -- convert integer to IEEE single precision number

SYNOPSIS
      x   = IEEESPFlt(  y  );
     d0                d0

    float   x;
    long    y;

FUNCTION
    Convert a signed 32 bit value to a single precision IEEE value
    and return it in d0. No exceptions can occur with this
    function.

INPUTS
    y -- 32 bit integer in d0

RESULT
    x is a 32 bit single precision IEEE value

BUGS

SEE ALSO
    IEEESPFix
```

1.10 mathieeesingbas.library/IEEESPMul

```
NAME
    IEEESPMul -- multiply one double precision IEEE number by another

SYNOPSIS
      x   = IEEESPMul(  y  ,  z  );
     d0                d0    d1

    float   x,y,z;

FUNCTION
    Compute x = y * z in IEEE single precision.

INPUTS
    y -- IEEE single precision floating point value
    z -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
    IEEESPDiv
```

1.11 mathieeesingbas.library/IEEESPNeg

```
NAME
    IEEESPNeg -- compute negative value of IEEE single precision number

SYNOPSIS
      x   = IEEESPNeg(  y  );
      d0              d0

    float   x,y;

FUNCTION
    Invert the sign of argument y and return it to caller.

INPUTS
    y - IEEE single precision floating point value

RESULT
    x - IEEE single precision floating point value

BUGS

SEE ALSO
```

1.12 mathieeesingbas.library/IEEESPSub

```
NAME
    IEEESPSub -- subtract one single precision IEEE number from another

SYNOPSIS
      x   = IEEESPSub(  y  ,  z  );
     d0                 d0     d1

    float   x,y,z;

FUNCTION
    Compute x = y - z in IEEE single precision.

INPUTS
    y -- IEEE single precision floating point value
    z -- IEEE single precision floating point value

RESULT
    x -- IEEE single precision floating point value

BUGS

SEE ALSO
    IEEESPAdd
```

1.13 mathieeesingbas.library/IEEESPTst

```
NAME
    IEEESPTst -- compare IEEE single precision value to 0.0

SYNOPSIS
      c   = IEEESPTst(  y  );
      d0                d0

    float   y;
    long    c;

FUNCTION
    Compare y to 0.0, set the condition codes for less than, greater
    than, or equal to 0.0.  Set the return value c to -1 if less than,
    to +1 if greater than, or 0 if equal to 0.0.

INPUTS
    y -- IEEE single precision floating point value

RESULT
    c = 1   cc = gt         for (y > 0.0)
    c = 0   cc = eq         for (y == 0.0)
    c = -1  cc = lt         for (y < 0.0)

BUGS

SEE ALSO
```