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1 SWS_IFXLibrary

1.1 Specification Item SWS_lfx_00250

Trace References:

none

Content:

The interpolation result obtained for rising and falling curves/maps shall be symmetrical.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77302: [lfx] Possibility of achieving symmetry requirement

Problem description:

From the requirement SWS_lfx_00250, it is observed that symmetry is not possible to be achieved for all cases.

For example:

Consider a rising curve as below

X_array = (23, 623)

Y_array = (1, 60000)

Xin = 24

then if round towards zero is applied during unscaling as per SWS_lfx_00016, the output obtained will be 100

Consider a falling curve as below

X_array = (-623, -23)

Y_array = (60000, 1)

Xin = -24

then if round towards zero is applied during unscaling as per SWS_lfx_00016, the output obtained will be 102

For the above rising and falling curve, if rounded off is applied during unscaling as per SWS_lfx_00016, then output will be 101 for rising curve and it will be 102 for falling curve.

Therefore Symmetry can not be achieved.

Agreed solution:

The requirement on symmetricity SWS_lfx_00250 shall be removed.

BW-C-Level:

Application	Specification	Bus
1	1	1

1.2 Specification Item SWS_lfx_00251

Trace References:

none

Content:

The intermediate results during unscaling in interpolation calculation shall be Rounded towards zero.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77301: [lfx] Rounding method not specified during unscaling in interpolation result computation

Problem description:

In SWS_lfx_00016, during unscaling of the intermediate result, there is no rounding mechanism specified. This will lead to different rounding mechanisms being applied by different implementers.

Agreed solution:

A new requirement in section 7.6 should be brought as like below.

7.6 library implementation

[SWS_lfx_00xxx] The intermediate results during unscaling in interpolation calculation shall be Rounded towards zero.

–Last change on issue 77301 comment 2–

BW-C-Level:

Application	Specification	Bus
4	4	1