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G.723.1 and G.729

Implementors'

Guide

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G.723.1 and G.729

Implementors' Guide

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Summary

This document contains the Implementers' Guide for the text of ITU-T Recommendation G.723.1 and the software C-code of G.729 Annexes F, G, H and I.

1 Editorial corrections to section 2.9/G.723.1 recommendation text

In March 1996, SG 15 approved Rec. G.723.1. [COM16-D219](#) reported a typographic error in the ITU-T G.723.1 recommendation text. In the last sentence of section 2.9 (Pitch Estimation), indices j and j' are inverted. The exiting text should be corrected as shown below.

[Begin Correction]

2.9 Pitch estimation

...

If the difference between the indices is greater than or equal to 18, the new maximum is selected only if $C_{OL}(f_j)$ is greater than $C_{OL}(f_{j'})$ by 1.25 dB.

[End Correction]

2 Modifications to fixed-point C source codes in G.729 Annexes F, G, H and I

In February 2000, SG16 approved G.729 Annexes F, G, H and I. As described in [COM16-D219](#), discrepancies between the G.729 annexes F, G, H and I fixed point source codes and the G729 main body and annex B fixed point source codes were found. Initialization of some variables is performed differently in these annexes than in the former G729 recommendations fixed point source codes.

The modifications are in the coder initialization functions `Init_Coder_ld8x()` (in files `cod_ld8x.c`, where x stands for f, g, h for Annexes F, G and H, respectively) and `Init_Coder_ld8c()` (in file `codld8cp.c` for annex I).

The following two lines are deleted:

```
/* to tame the coder */  
static Word32 L_exc_err[4];
```

And the line:

```
for(i=0; i<4; i++) L_exc_err[i] = 0x00004000L; /* Q14 */
```

is replaced by two lines:

```
/* to tame the coder */
Init_exc_err();
```

The call of the Init_Cod_cng() routine is inserted at the end of the set of instructions below

```
if(dtx_enable == 1) {
    pastVad = 1;
    ppastVad = 1;
    seed = INIT_SEED;
    vad_init();
    Init_lsfg_noise();
    Init_Cod_cng ();
}
```

Table 1 gives the numbers of the lines affected by these initialization modifications.

Table 1:
Modified line numbers in the encoder initialization routines

Annex	File name	Routine name	Taming initialization		DTX initialization
			Deleted lines	Replaced line	Init_cod_cng() call insertion after line
F	Cod_ld8f.c	Init_Coder_ld8f()	84 & 85	154	163
G	Cod_ld8g.c	Init_Coder_ld8g()	84 & 85	176	210
H	Cod_ld8h.c	Init_Coder_ld8g()	84 & 85	169	N/A
I	Codld8cp.c	Init_Coder_ld8c()	83 & 84	175	209

-- END --
