COVERING NOTE

GENERAL SECRETARIAT INTERNATIONAL TELECOMMUNICATION UNION

Geneva, 3 July 2002

ITU – TELECOMMUNICATION
STANDARDIZATION SECTOR

Subject: Corrigendum 3 (03/2001)

ITU-T Recommendation G.729 Annex B (10/1996)

Coding of speech at 8 kbit/s using conjugate-structure algebraic-code-excited linear prediction (CS-ACELP) – Annex B: A silence compression scheme for G.729 optimized for terminals conforming to Recommendation V.70

1) From SG 16 meeting in Geneva, 26 January – 6 February 1998: Problems related to frame erasures

According to the Implementors' Guide, the following lines in `dec_ld8k.c` and `dec_ld8a.c` in G.729B and G.729AB, respectively:

```
if(bfi ==1)
   if(past_ftyp == 1) ftyp = 1;
   else ftyp = 0;
```

should be replaced by:

```
if(bfi ==1) {
   if(past_ftyp == 1) ftyp = 1;
   else ftyp = 0;
   *parm = ftyp;
}
```

Similarly, the test sequence TSTSEQ6.BIT is updated according to the Implementors' guide.

In line with the Implementors' Guide, the detection of frame erasures is updated in order to handle erased non-transmitted frames, i.e. the number of transmitted bits is zero, and it is not possible to check for the zero property of the bits. The following lines in bits.c (in function read_frame) of both G.729B and G.729AB should be changed from:

```
  /* the hardware detects frame erasures by checking if all bits
     are set to zero */

  parm[0] = 0;           /* No frame erasure */
  for (i=0; i < serial[1]; i++)
    if (serial[i+2] == 0 ) parm[0] = 1;  /* frame erased     */
```

to:

```
  /* for speech and SID frames, the hardware detects frame erasures
     by checking if all bits are set to zero */
  /* for untransmitted frames, the hardware detects frame erasures
     by testing serial[0] */

  parm[0] = 0;           /* No frame erasure */
  if(serial[1] != 0) {
   for (i=0; i < serial[1]; i++)
     if (serial[i+2] == 0 ) parm[0] = 1;  /* frame erased */
  }
  else if(serial[0] != SYNC_WORD) parm[0] = 1;
```

2) From SG 16 meeting in Geneva, 13-17 November 2000: Textual description

According to the discussions during the session of Q19/16 and based on Delayed Contribution 71, the following modifications are to be made to the textual description in B.3.5 of Annex B of G.729:

Current text	Proposed text
1) if $\Delta S > a_1 \cdot \Delta ZC + b_1$ then $I_{VD} = 1$	1) if $\Delta S > a_1 \cdot \Delta ZC + b_1$ then $I_{VD} = 1$
2) if $\Delta S > a_2 \cdot \Delta ZC + b_2$ then $I_{VD} = 1$	2) if $\Delta S > a_2 \cdot \Delta ZC + b_2$ then $I_{VD} = 1$
3) if $\Delta E_f < a_3 \cdot \Delta ZC + b_3$ then $I_{VD} = 1$	3) if $\Delta E_f < a_3 \cdot \Delta ZC + b_3$ then $I_{VD} = 1$
4) if $\Delta E_f < a_4 \cdot \Delta ZC + b_4$ then $I_{VD} = 1$	4) if $\Delta E_f < a_4 \cdot \Delta ZC + b_4$ then $I_{VD} = 1$
5) if $\Delta E_f < b_5$ then $I_{VD} = 1$	5) if $\Delta E_f < b_5$ then $I_{VD} = 1$
6) if $\Delta E_f < a_6 \cdot \Delta S + b_6$ then $I_{VD} = 1$	6) if $\Delta E_f < a_6 \cdot \Delta S + b_6$ then $I_{VD} = 1$
7) if $\Delta S > b_7$ then $I_{VD} = 1$	7) if $\Delta S > b_7$ then $I_{VD} = 1$
8) if $\Delta E_l < a_8 \cdot \Delta ZC + b_8$ then $I_{VD} = 1$	8) if $\Delta E_f < a_8 \cdot \Delta ZC + b_8$ then $I_{VD} = 1$
9) if $\Delta E_l < a_9 \cdot \Delta ZC + b_9$ then $I_{VD} = 1$	9) if $\Delta E_f < a_9 \cdot \Delta ZC + b_9$ then $I_{VD} = 1$
10) if $\Delta E_l < b_{10}$ then $I_{VD} = 1$	10) if $\Delta E_f < b_{10}$ then $I_{VD} = 1$
11) if $\Delta E_l < a_{11} \cdot \Delta S + b_{11}$ then $I_{VD} = 1$	11) if $\Delta E_l < a_{11} \cdot \Delta S + b_{11}$ then $I_{VD} = 1$
12) if $\Delta E_l > a_{12} \cdot \Delta E_f + b_{12}$ then $I_{VD} = 1$	12) if $\Delta E_l > a_{12} \cdot \Delta E_f + b_{12}$ then $I_{VD} = 1$
13) if $\Delta E_l < a_{13} \cdot \Delta E_f + b_{13}$ then $I_{VD} = 1$	13) if $\Delta E_l < a_{13} \cdot \Delta E_f + b_{13}$ then $I_{VD} = 1$
14) if $\Delta E_l < a_{14} \cdot \Delta E_f + b_{14}$ then $I_{VD} = 1$	14) if $\Delta E_l < a_{14} \cdot \Delta E_f + b_{14}$ then $I_{VD} = 1$

Those changes do not affect the C-source code.