

TSG-RAN Working Group1 meeting #8
New York, U.S.A., 12th – 15th October 1999

TSGR1#8(99)h60

Liaison To: TSG-SA WG4 Codec Working Group
From: TSG-RAN WG1
Title: Liaison statement on updating the number of AMR speech bits

TSG RAN WG1 (R1) would like to thank TSG SA WG4 (S4) for taking account of the L1 requirement on the number of AMR class-A bits [1] and for updating the number of 6.7 kbit/s mode bits [2]. Regarding the updated number of class-A bit, R1 revisited the matter and concluded that for the best possible Blind Transport Format Detection (BTFD) performance, there should be a farthest possible distance of the number of class A bits between the two adjacent AMR modes.

In BTFD, in addition to the CRC results, the soft values of channel decoding are beneficial for more reliable transport format detection. In using such a combined detection way, the false detection probability will be decreased by keeping farthest possible distance of the number of bits between the two adjacent AMR modes [3]. Therefore, in order to achieve the most reliable BTFD, R1 would like to ask S4 again for a possible modification on the AMR speech bit format as follows:

For the AMR6.7 mode, the bit assignment between the two classes i.e. class-A and -B, could be modified in such a way that the three most important bits of class-B are to be reassigned to class-A and this three-bit shift will produce the best possible BTFD performance. Class-A and -B of the AMR6.7 mode then will have 58 bits and 76 bits respectively.

S4's kind re-consideration on the above matter would be deeply appreciated.

References:

- [1] "Liaison statement on classification of AMR speech bits", TSGR1#7(99)e42
- [2] "Liaison statement on Support of Speech Service in RAN", TSGS4#6(99)264R
- [3] "Blind transport format detection performance for AMR", TSGR1#8(99)g75