

**Liaison To:** TSG-R1, R2, R3  
**From:** TSG-S4 Codec Working Group  
**cc:**  
**Subject:** Support of Speech Service in RAN

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TSG-S4 plans to complete the AMR Speech Codec specifications on time for the approval of the 3GPP Release 99, with the production of a Characterization Report (3G TR 26.901) providing background information and quality performances of the speech codec in multiple representative 3G operational conditions. This report could be used for setting the speech service QoS parameters in 3G networks.

In order to complete this activity, the support of the speech service over the Radio Access Network must be finalized by TSG-RAN. Specifically, the definition of the channel coding for the support of the speech codec modes and the definition of the rate adaptation protocols are considered critical to complete and check the consistency of the speech related specifications.

Additionally, in order to evaluate the quality delivered by the AMR codec modes in 3G radio channels in presence of propagation errors, we will need to define a set of representative operational conditions (in terms of Terminal Speed, C/I or Eb/No...). TSG-S4 will also need a corresponding set of Error Patterns to process the speech samples to use during the subjective listening tests.

Understanding the current workload of TSG-RAN Working Groups, TSG-S4 would like to propose the following procedure for the completion of this task:

- TSG-S4 will agree on a set of representative propagation conditions for which we believe the quality delivered by the AMR speech codec modes should be evaluated.
- This set will then be submitted to TSG-R1 for comments and approval after the next TSG-S4 meeting in September 8-10, 1999.
- TSG-S4 members will then prepare the corresponding Error Patterns and submit them to TSG-R1 for comments and approval, providing that the channel coding used for the support of the speech service is fully defined. This task should ideally be completed by September 1999 in order to start the characterization tests in 4Q99.

TSG-S4 would appreciate to receive comments from TSG-RAN working groups on their plan for the completion of the specifications related to the support of the speech service over the 3G-access network. TSG-S4 would also appreciate to receive comments on the proposed procedure for the production of the required Error Patterns, before our next meeting in September 8-10, 1999.