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**Source:** TSG RAN WG4  
**To:** TSG RAN WG1  
**CC:** TSG RAN WG2, TSG RAN WG3  
**Title:** Response to LS (R1-010173) on impact of compressed mode on DPCCH gating benefits  
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RAN WG4 thanks RAN1 WG1 for its LS R1-010173 (R4-010156) on impact of compressed mode on DPCCH gating benefits. RAN WG4 has discussed this issue at the RAN4#15 meeting in Boston, held on 23-26 January.

As compressed mode is used for inter frequency and inter system measurements, RAN WG4 can not accept that DPCCH gating degrades the performance of these measurements.

This is currently taken care of by not allowing the compressed mode and DPCCH gating to be active at the same time, as pointed out by RAN WG1. However, from RAN WG4 point of view, this does not need to be the case, since RAN4 WG4 is considering not to change the requirements for these measurements, even the compressed mode and DPCCH gating would be active at the same time. Naturally, this would require some amendments to current DPCCH gating concept i.e., to specify that network and UE takes care that compressed frames are provided for UE in spite of DPCCH gating, for example by having well specified rules when gating may be applied and when not. The UE also has to be able to report the measurement results, if that is needed. Thus RAN4 would like to encourage other WGs to find such solutions in order to further improve the benefits of DPCCH gating.

In the discussions of RAN WG4 a number of observations, which are listed below, were made. It is also hoped that these observations clarify the RAN WG4 position on the actual question by RAN WG1 on the use of compressed mode in terms of the percentage of time when the compressed mode is active.

- ?? Based on studies presented in RAN WG4 on the impact of compressed mode on capacity, there are reasons to believe that network operators will try to avoid the excessive use of compressed mode in their networks. Thus it is believed that there will be always a notable number of users in operators' network who do not have compressed mode activated.
- ?? It has become apparent that continuous use of compressed mode should be avoided.
- ?? In some regions or for some operators there is less need to make inter frequency or inter system measurements, since there might be no other measurable systems or operators have only one carrier in use.
- ?? Dual receiver terminals do not need compressed mode thus benefits of DPCCH gating are fully in use for such terminals