3GPP TSG-RAN WG1#7 **TSGR1#7(99)a90**
Hannover, Germany, 30. August – 03. September 1999

3GPP TSG RAN WG4 TSGR4#6 (99)430
26 - 29 Jul 1999
South Queensferry, Scotland

Source: **TSG RAN WG4**

TO: **TSG RAN WG1**

cc: **TSG T WG1 SWG-EMC**

TITLE: **LIAISON STATEMENT -- Envisaged Impact of DPCCH Gating of UE when in Control Only State**

This LS is in response to the TSG-RAN WG1 LS TSGR1#6(99)A49 (TSGR4#6(99)380), requesting TSG RAN WG4's and TSG T WG1 SWG-EMC's views on the Subject topic.

RAN WG4 is pleased to send this LS conveying our views based on an initial assessment. As RAN WG1 is aware, the area of EMC effects to the external environment is one that needs to be studied much more thoroughly in order to make a more complete assessment. WG4 believes that in this case the EMC effect which is most important is the immunity of non-radio products. RAN WG4 is of the view that an EMC assessment of the requested proposed Gated DPCCH scheme, if in fact it may even need to be considered, more appropriately belongs in the TSG T WG1 SWG-EMC, which may also express its views on the matter (in fact, RAN WG4 would like to encourage this). RAN WG4 is of the view that such an assessment can be a very time- and resource-consuming exercise, which may still not produce a more definitive answer.

Immunity effects of non-radio products are highly non-linear, and their subjective effects, especially for audio systems, are highly dependent on the characteristics of the transmitted signal:

- The output power for the condition being considered.
- The amplitude of the envelope variation.
- For interference to audio products, the frequency of the envelope variation (note that the subjective effect of audio interference depends considerably on the position within the audio frequency range, and is highest at around 1KHz).

While RAN WG4 has not done the above-mentioned detailed analysis, we are of the view that it would be a prudent step for RAN WG1 to consider all means to reduce, to the maximum extent possible, the potential for EMC effects of such actions as the requested Gated DPCCH in Control Only State.

WG4 recommends to WG1 that it should minimize the potential for EMC by:

- if possible, restricting regular gating of RF.
- Minimizing the envelope variations due to bearers which are transmitted discontinuously.
- Avoiding conditions which result in abrupt changes of RF power.
- Where possible, in the case of external audio equipment, keeping frequencies of modulation of the RF envelope away from the range which causes most subjective annoyance.
- Considering the service which is likely to be in use, and whether it is likely to be used in a manner where terminals could be used close to equipment which could be susceptible to EMC.