

TSG-RAN Working Group 2 meeting #3
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Yokohama, Japan

TSGR2#3(99)274

**TSG-RAN Working Group1 meeting #3
Nynäshamn 22-26, March 1999**

TSGR1#3(99)313

Source: TSG RAN WG1

To: TSG RAN WG2

Title: Liaison Statement on Hybrid ARQ Type II/III

WG1 has received the liaison statement by WG2 and would like to comment on the raised questions. WG1 has discussed the incorporation of Hybrid ARQ Type II/III schemes from a layer 1 perspective. WG 1 has recognised the potential of Hybrid ARQ Type II/III for a throughput increase of packet data. In the Physical Layer description no provision for using this technique has been made so far, since it has not yet been studied in detail up to now. RLC operation without using Hybrid ARQ Type II/III should therefore also be kept for the time being.

WG2 was asking WG1 to comment on the impact of Hybrid ARQ TYPE II/III on the physical layer. WG1 needs further clarification on the following aspects.

If combining is used in the receiver, the complexity increases since the transmitted blocks have to be stored for the case of an erroneous transmission. WG1 asks WG2 if combining may be optional for the UE/Network.

WG1 sees that the use of combining may require a RLC-PDU identification to be encoded separately. WG1 asks WG2 to give more details on this issue?

Variable code rates could be generated from the mother code that will be specified in WG1 (current assumption is coding rate $\frac{1}{2}$ or $\frac{1}{3}$) by applying suited puncturing pattern. The impact of additional puncturing has to be studied by WG1, particular when such service is multiplexed with other services.

Could WG2 inform WG1 how many different code rates shall be used. How is the used code rate for a transmitted RLC-PDU version signalled to the receiver ?

First inputs, how to support Hybrid ARQ Type II/III were received [1]. The different options have to be studied by WG1.

WG1 invites WG2 to comment on these issues.

[1] Support of Hybrid ARQ Type II/III by the Physical Layer, Siemens TSGR1#3(99)296