Source:	**TSG RAN WG1**
To:	**TSG RAN WG2**
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Title:	**LS on Recommendations on HSDPA**
Document for:	**Discussion**

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Introduction: In this contribution, recommendations on various features for HSDPA are summarized.

Recommendations :

1. Adaptive Modulation and Coding (AMC):

Based on numerous discussion and simulation results, it was observed that a HS-DSCH with AMC and Hybrid ARQ can provide substantial higher peak rates and average throughput than the current Release-99 DSCH.   As such, RAN1 concluded that AMC should be part of Release 5 HS-DSCH.

2. Fast Cell Selection:

RAN1 recommends that the study of intra-Node B and inter-Node B Fast Cell Selection should be considered together and not separately. Although, initial simulation studies indicate that some benefit with FCS can be observed in some cases the results are not conclusive. In view of the above RAN1 recommends that both intra and inter Node-B FCS should be studied further during Release#5 HSDPA work so that it can be a part of Release-6 specification.

3. MIMO:

The goal of HS-DSCH is to increase the average throughput as well as the peak data rate. MIMO represents a promising approach but there are a wide variety of applicable MIMO techniques which should be investigated along with MIMO examples in the TR during the standardisation process. It may also be noted that, the performance advantage of MIMO schemes is heavily dependent on the underlying channel model. The channel model should be agreed upon in RAN1 and will be used to verify different techniques. In view of the above, RAN1 recommends that MIMO should be part of further HSDPA work.

4. Stand-alone DSCH:

RAN 1 identified that the stand-alone DSCH was a specific case of mapping of transport channels for a UE in a multi-carrier cell. If a work item on multi-carrier cells was to be considered at RAN, RAN 1 recommends that a study item parallel to HSDPA is introduced to study the benefits of stand-alone DSCH for HSDPA as part of the UTRAN evolution.