

## Status Report for SI to TSG

**Study Item Name: Feasibility study on UTRA Wideband Distribution System (WDS)**

**SOURCE:** Rapporteur – Carlo Matarasso (Tekmar Sistemi s.r.l.) **TSG:** RAN **WG:** 4

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**Ref. to WI sheet:** RAN\_study\_Items.doc

### **Progress Report since the last TSG (for all involved WGs):**

A paper [3] with a description of the WDS was presented at the RAN4 #23. It tried to answer to the requests of RAN4 delegates for a more exhaustive definition of the WDSs and a their differences to the repeaters, especially the conducted repeaters. It was objected that the difference between a conducted repeater and a WDS is still unclear, and that the actual difference might be that the WDS connects multiple BSs. It was questioned if the noise coming from the radio heads to the central unit is the same for all units, in the contribution it was assumed so, but there might be some cases when this is not true. It was also commented that the power coming to the WDS from diverse BSs might be different, there has to be a unit levelling these power levels.

It was objected some of the wording in section 4.3 as inappropriate for a TR. The chairman noted that the noise figure is the only parameter considered in section 4.2 for the performance simulation and asks about other parameters. Tekmar clarifies that it will present further contributions considering other parameters.

The group did not agree to add these changes to the TR.

### **List of Completed elements (for complex work items):**

There is no progress since the last TSG RAN.

### **List of open issues:**

The definition of the WDS will be reconsidered according to the comments on [3] at RAN4 #23.

Moreover the evaluation of the RF parameters of the WDS will be investigated by means of simulations. These simulations will be based on models of WDS that will be presented at RAN4 #24 for approval. Further work is required to verify the recommended margin consistency for the RF uplink parameters (e.g. Noise Figure, Blocking, and Intermodulation) and downlink parameters (e.g. Modulation Accuracy, Frequency Stability and Accuracy, Output Power Stability and Accuracy) for all scenarios, particularly in the multi-carrier case.

The relationship between the WDS and the BS classification is still to be defined, it needs further investigation and it can be completed when the definition of WDS will be approved and the specification of the low and medium range FDD BS will be defined.

More work is also required in order to address all practical issues that may arise from system integration activities, this may require co-ordination with RAN3, and SA5

**Estimates of the level of completion (when possible):** 40%

**WI completion date review resulting from the discussion at the working group:** March 2003

### **References to WG's internal documentation and/or TRs:**

[1] TR 25.867 v 1.0.0 "Feasibility Study for Wideband Distribution Systems in 3<sup>rd</sup> Generation Networks"

- [2] RP-010938 Status report of SI "Feasibility Study for Wideband Distribution Systems in 3<sup>rd</sup> Generation Networks"
- [3] R4-020721 Definition of Wideband Distribution Systems