

Source: Mikom

Title : Status report for UTRA FDD Repeater Rel 4 work item

1 Introduction

Extensive work has been carried out on this work item and RAN WG4 succeeded to complete the UTRA FDD Repeater specification for Release 4.

2 Completed Work

3GPP RAN 4 has held 4 working group meetings and 2 adhoc since the work item creation in June 2000. The following work has been performed

- The core specification TS25.106 has been created. The agreed version to be proposed to include in Release 4 specifications is 1.3.0 which will be upgraded to version 2.0.0.
- The test specification TS25.143 has been created. The agreed version to be proposed to include in Release 4 specifications is 1.2.0 which will be upgraded to version 2.0.0.
- The Repeater EMC requirements are included in the TS25.113.
- The relationship between Out-of-Band-Gain and Modulation Errors for Repeaters has been studied to define the parameter in the core specification.
- Repeater co-existence simulations including Downlink and Uplink have been performed to investigate the system effect of Repeaters.
- A new TR25.956 with the title “UTRA Repeater; Planning Guidelines and System Analysis” has been created to include several aspects of Repeaters. All contributions performed in the system analysis have been included in this document.

3 Work to be completed

- The only remaining work is in the conformance testing specification TS25.143. The intend is to align it with the part of the work in TS25.141 in the measurement uncertainties and test tolerances. The version 2.0.0 of TS25.143 is addressing this.

4 Status of specifications

4.1 Creation of TS 25.106 and proposed changes

Clause	Description	Status and Comment
1	Scope	✓ Completed.
2	References	✓ Completed.
3	Definitions, symbols and abbreviations	✓ Completed
4	General	✓ Completed
5	Frequency bands and channel arrangement	✓ Completed
6	Output power	✓ Completed
7	Frequency stability	✓ Completed
8	Out of band gain	✓ Completed
9	Unwanted emission	✓ Completed. The spurious emission and intermodulation requirements listed on the work item description sheet is included in here.
10	Modulation accuracy	✓ Completed
11	Input Intermodulation	✓ Completed. The blocking and the intermodulation requirement listed on the work item description sheet is included in this chapter.

4.2 Creation of TS25.143 and proposed changes

Clause	Description	Status and Comment
1	Scope	✓ Completed.
2	References	✓ Completed.
3	Definitions, symbols and abbreviations	✓ Completed
4	Frequency bands and channel arrangement	✓ Completed

5	General test conditions and declarations	✓ Completed in version 2.0.0. Values of the measurement uncertainties and Repeater test tolerances are still in brackets. This part is depending on the value decided for TS25.141 for the BS.
6	Output power	✓ Completed
7	Frequency stability	✓ Completed
8	Out of band gain	✓ Completed
9	Unwanted emission	✓ Completed
10	Modulation accuracy	✓ Completed
11	Input Intermodulation	✓ Completed

4.3 Changes to TS25.113

Clause	Description	Status and Comment
4	Test conditions	✓ The description of the test condition for Repeater has been added. Completed.
5	Performance assessment	✓ The performance assessment definition for Repeaters has been added. Completed.
6	Performance Criteria	✓ The performance criteria definition for Repeaters has been added. Completed
7	Applicability overview	✓ The overview has been extended to include Repeater. Completed
A.1	Emission	✓ The attachment has been extended / modified to included Repeater. Completed
A.2	Immunity	✓ The attachment has been extended / modified to included Repeater. Completed

The changes are summarised in a CR (see TDoc R4-010409 and the resulting TDoc for RAN).

5 Impacts on other RAN Working Groups

The impact on location service has been expressed in a LS to RAN WG2.