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Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of this TS are subject to continuing work within 3GPP and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released with an identifying change of release date and an increase in version number as follows:

Version m.t.e

where:

m   indicates [major version number]

x   the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

y   the third digit is incremented when editorial only changes have been incorporated into the specification.

Introduction

This clause is optional. If it exists, it is always the third unnumbered clause.

No text block identified.

1   Scope

The present document …

2   References

[1] 3GPP TS 25.413, UTRAN Iub interface Layer 1

3   Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the [following] terms and definitions [given in ... and the following] apply.

3.2 Symbols

For the purposes of the present document, the following symbols apply:

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

4   Implementation Specific O&M Transport

4.1 Introduction

[Editor's note: This chapter should describe briefly the separation of logical and implementation specific O&M and the requirements to a transport mechanism for implementation specific O&M]

As described in [2] the O&M of NodeB is separated in two parts: Logical O&M and Implementation Specific O&M. The former is responsible for the management of logical resources of NodeB while the latter depends on the implementation of NodeB. The purpose of this split is to ensure that the scope of O&M functions over the Iub interface is sufficient to allow a multi-vendor environment to be deployed. In this sense the Implementation Specific O&M part allows the manufacturer to integrate proprietary O&M functions in addition to standardised functions in the logical O&M part. But apart from the Iub O&M functions a standardised transport of the Implementation Specific O&M part is crucial for the realisation of a multi-vendor environment and it is an essential pre-requisite to be supported by the same bearer as the Iub interface. The transport mechanism described in the following should neither limit the vendor's freedom to provide proprietary O&M capabilities nor limit the operator's freedom to design the network in an appropriate manner.

4.2 Requirements

[Editor's note: This section should describe two possibilities for the routing of the implementation specific O&M signalling: directly to the Management Platform or via the RNC. It should point out that both routes should be supported.]

While this specification only addresses the transport of NodeB Implementation Specific O&M signalling, many of the following requirements are derived from generic requirements for O&M of UMTS network elements:

- Common O&M infrastructure for all network elements

- Independence from various data link protocols

- Support of various higher layer protocols and applications

- Secure transmission

- No Impact of O&M transport on traffic transport and signalling

- Re-use of existing transport facilities, i.e. co-existence of Iub and Implementation Specific O&M on the same bearer

4.3   Routing

Since the NodeB is connected to the RNC the routing of the Implementation Specific O&M via the RNC is one solution. In this case it is the responsibility of the RNC to route Implementation Specific O&M signalling traffic. But like any other router the traffic exchanged over this signalling link is completely transparent to the RNC at application level.

The O&M signalling for co-located equipment can be treated as a special kind of Implementation specific O&M. This means that Implementation Specific O&M signalling of NodeB and O&M signalling for co-located equipment should be able to share the same physical transport channels. However both O&M signalling links are completely independent and do not know about each other.
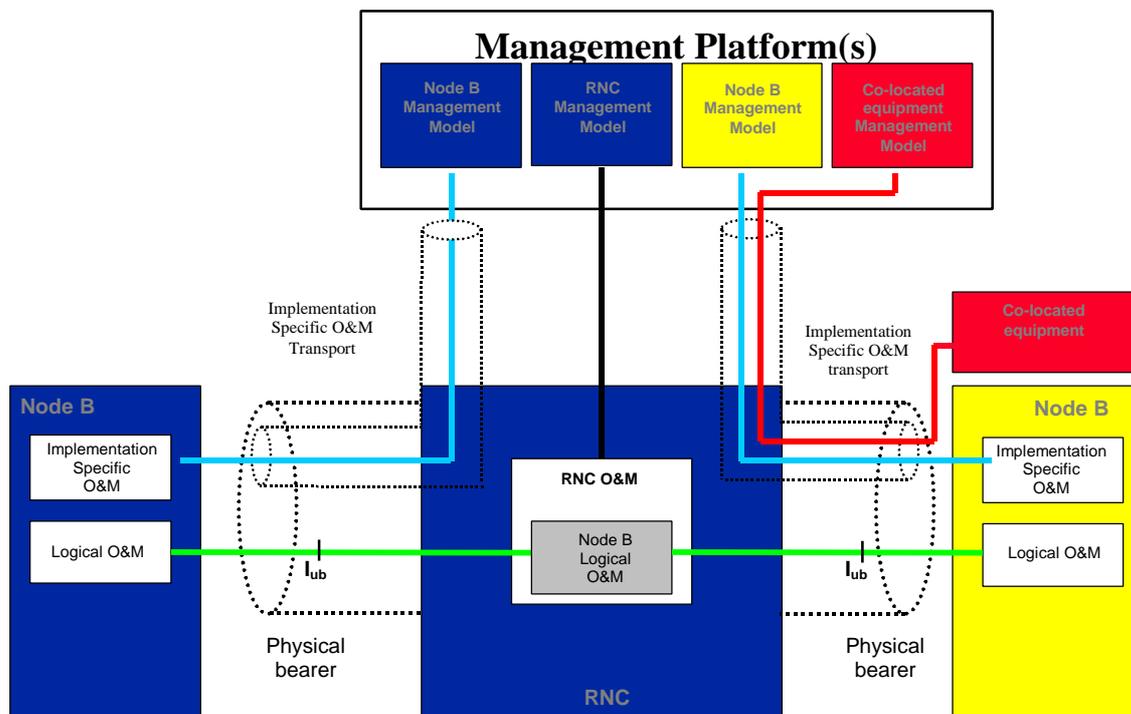
**Figure 1: Implementation Specific O&M Transport via RNC**

4.34.4   Transport Bearer

[Editor's note: Within this section the transport mechanism, i.e. one or more protocol stacks, should be specified. In case of routing via the RNC, Layer 1 as described in [1] should be used between NodeB and RNC..]

An appropriate transport bearer for Implementation Specific O&M depends on the routing and should consider the requirements listed in section 4.2. IP should be the transport mechanism in order to allow a data link independent support of a variety of O&M applications and protocols for the Implementation Specific O&M of the NodeB. This includes the provision of an IP forwarding function for IP-based O&M signalling for the management of co-located equipment.

In case of routing of Implementation Specific O&M via the RNC IP datagrams containing O&M signalling have to be carried over the same bearer as Iub. Since ATM will be used on Iub, IP over ATM should be the bearer for O&M signalling.

The following figure shows the protocol stack Implementation Specific O&M transport between NodeB and RNC:

IP
AAL5
ATM
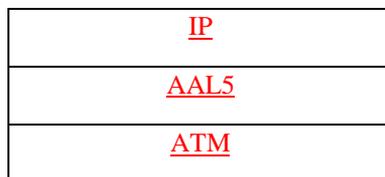
One or several AAL5/ATM permanent or switched VC's should be used as layer 2 resources between RNC and NodeB.

6 Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

History

Document history		
V0.0.1	1999-06	Initial Specification Structure
Editor for 3GPP RAN 25.442 is:		
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