TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

TSGRP#7(00)011

Title: **Agreed CRs to TS 25.442**

Source: **TSG-RAN WG3**

Agenda item: **6.4.3**

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-000819	25.442	001	1	Clarifications to Implementation Specific O&M Transport	F	agreed	3.1.0	3.2.0

3GPP TSG RAN WG3 Meeting #11
Sophia Antipolis, France, 28.2.-3.3. 2000

Document* *R3-000819

CHANGE REQUEST

25.442	**CR**	**001r1**	Current Version:	3.0.0

↑ *CR number as allocated by MCC support team*

For submission to: RAN#7 *list expected approval meeting # here ↑*	for approval	X	strategic		*(for SMG use only)*
	for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: R-WG3 **Date:** 22nd Feb. 2000

Subject: Clarifications to Implementation Specific O&M Transport

Work item: 22.2

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

Some ambiguities have been identified in the text of the current TS 25.442 v3.0.0. In order to remove them the following corrections and modifications have been done:

- The document ~~text~~ is refined in order to more accurately reflect the ~~given~~ intented scope of the document.
- Clarifying text of the use of IP addresses and VCs to make the specification clearer and unambiguous.
- The list of references is updated.

Clauses affected: Chapter 2, 4.2 and 4.3,

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] 3GPP TS 25.431, UTRAN Iub interface Layer 1

[2] 3GPP TS 25.401, UTRAN Overall Description

[3] ITU-T Recommendation I.363.5 (8/1996): "B-ISDN ATM Adaptation Layer Type 5 Specification"

[4] IETF RFC 2225 (4/1998): "Classical IP and ARP over ATM"

[5] IETF RFC ~~1483~~ 2684 (~~7~~9/~~1993~~1999): "Multiprotocol Encapsulation over ATM Adaptation Layer 5"

[6] IETF RFC 791 (9/1981): "Internet Protocol"

4 Implementation Specific O&M Transport

4.1 Requirements

While this specification only addresses the transport of Node B 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

4.2 Routing

It is the responsibility of the RNC to route Implementation Specific O&M signalling traffic. The traffic exchanged over this signalling link is completely transparent to the RNC. Both RNC and Node B have to support the routing of Implementation specific O&M via the RNC.

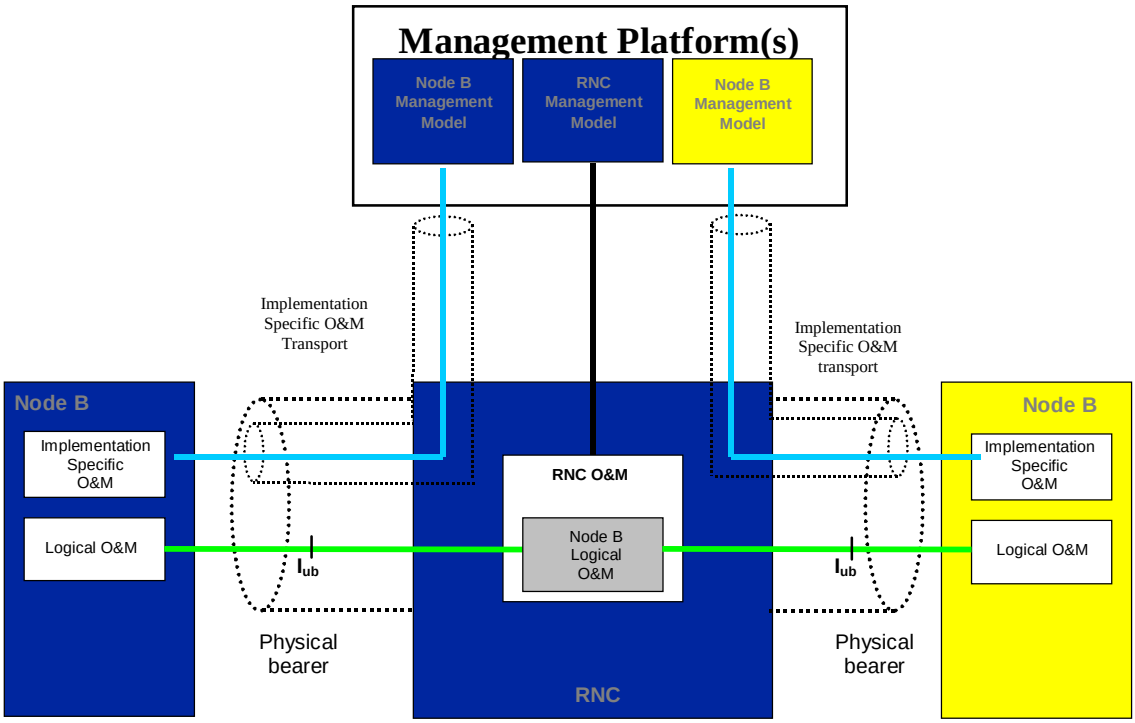

Figure 1: Implementation Specific O&M Transport via RNC

4.3 Transport Bearer

An appropriate transport bearer for Implementation Specific O&M should consider the requirements listed in section 4.1. IP [6] 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 Node B.

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 for Implementation Specific O&M transport between Node B and RNC:

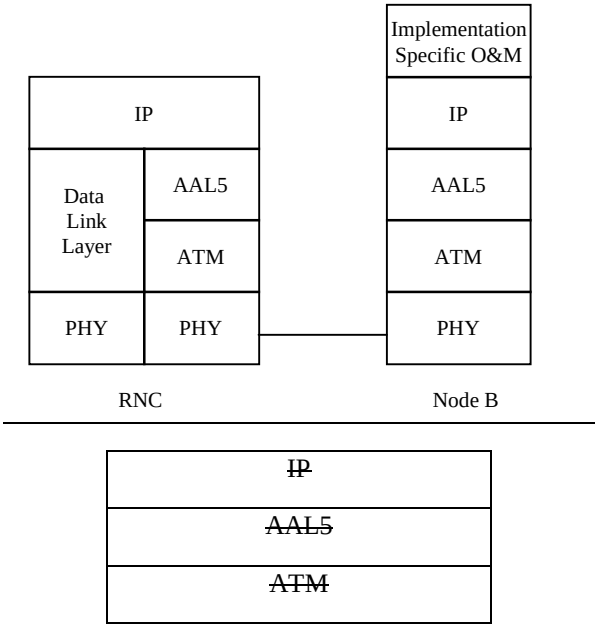

Figure 2: Protocol Stack for Implementation Specific O&M Transport

AAL5 shall be used according to I.363.5.

AAL5 virtual circuits are used to transport the IP packets containing Implementation Specific O&M signalling data between Node B and RNC. Multiple VCs can be used over the interface. ~~There is a one-to-one relationship between the VC and the IP address as required by Classical IP over ATM. An association must be made between a peer node's IP address and a VC.~~ An association shall be made between a VC and the IP addresses that are related to this VC in the peer node side. This association can be made using O&M or using ATM Inverse ARP according to Classical IP over ATM.

Classical IP over ATM protocols are used to carry the IP packets over the ATM transport network. Classical IP over ATM is specified in IETF RFC 2225 0. Multiprotocol Encapsulation over AAL5 is specified in IETF RFC ~~1483~~ 2684.