Technical Specification Group Services and System Aspects
Meeting #7, Madrid, Spain, 15-17 March 2000

TSGS#7(00)0119

Source: **WG SA5 (Telecom Management)**

Title: **Report on RAN O&M consistency issue**

Document for: **Information and Decision**

Agenda Item: **5.5.4**

SA5 report on the RAN O&M consistency issue

1. Introduction

In the last TSG-SA #6 meeting in Sophia Antipolis, the SA Plenary noted that there existed some concern about possible interoperability difficulty in the management information flows around the RNC node downward to the Node-Bs and upward to the element manager or to the network manager due to the potential architecture philosophy difference taken by the RAN (RAN3) group and the SA (SA5) group in defining the Release 99 UMTS O&M specifications. The Plenary instructed SA5, which bears the responsibility of coordinating across the entire 3GPP entities regarding all aspects of management issues, to study the situation and report back to the TSG-SA #7 meeting its findings together with a proposed resolution plan if any problem is indeed uncovered.

2. Findings

SA5 investigated the issue re-examining the TS 25.433 prepared by RAN3, that defines the Node-B O&M messages over the Iu-B interface.

Through this study, SA5 reconfirmed that the specification methodology taken by RAN3 in defining the O&M messages over the Iu-B interface was that of a **procedure-oriented** approach whilst the most up-to-date management/O&M specification and implementation technology widely accepted both in various standards bodies and the information technology industry including the telecommunication industry is based on the **object-oriented** approach.

The approach taken by SA5 in building the architecture of the management system of the UMTS is based on the object-oriented approach consistent with the modern telecommunications management network technology. Using the object-oriented technology in specifying, designing, and implementing a complicated system renders many advantages over using the more out-dated procedure-oriented technology. One of such advantages rendered by an object-oriented technology is a drastic reduction of overall cost by significantly reducing the perceived system complexity. The reduction of the perceived system complexity also makes it significantly easier to deal with the evolution of the system.

SA5 noted that it was regretful that R-99 RAN O&M specification was not based on the object-oriented technology. However, SA5 also found that taking different specification technologies does not automatically imply that there will necessarily be interoperability problems across different interfaces, although there exists a higher likelihood of such a problem created due to the less robust technology side.

After a careful study of the RAN specification containing the O&M message definitions for the Iu-B interface, SA5 concluded that the message definitions are quite extensive and that it is not

expected to encounter any serious interoperability problems in the Release 99 set.

3. Conclusion

SA5 found that there is no clear indication of inconsistency between the RAN O&M specification for Release-99 worked by the RAN group within the overall management architecture of the UMTS specified by SA5.

However, SA5 opines that a continuous use of an out-dated specification technology in RAN O&M definition in the later releases will chastise the flexibility of UMTS RAN O&M. Therefore, it is SA5's strong recommendation that the RAN group takes in Release 2000 specification work the more advanced specification technology, that is, the object-oriented technology, more widely accepted in the standardisation arena as well as in the implementation industries.