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Alcatel, Ericsson, Fujitsu, Lucent, Motorola, NEC, Nokia, Nortel, Panasonic, Siemens

Title: **Ensuring backward compatibility for Release 99 specifications**

Document for: Decision

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1 Introduction

In order to ensure interoperability, it is essential to keep the Release 99 specifications backward compatible between versions. This document proposes that 3GPP TSG RAN would strengthen the working principles in such a way that backwards compatibility is ensured.

2 Discussion

In May 2001, the operation of 3G systems providing 3G services will be started in Japan and other countries will soon follow. In the beginning of 2002, a significant number of operators are operating 3G systems and the number will continuously increase. From the operators' point of view, interoperability of equipment is essential, e.g. to be able to offer terminals from different vendors and to be able to provide roaming services. From the manufacturers' point of view, it is required that the 3GPP specifications are stable and kept backward compatible in order to provide interoperable products of RAN equipment and terminals.

The TSG RAN release 99 versions up to December 2000 have not been backward compatible with the previous version. This is due to the fact that there have been many errors to correct in the specifications and that the corrections have been included in the TSG RAN specifications in the most straightforward way; i.e. to just correct what was erroneous. This has meant that a new version of a signalling specification have not been backward compatible with the previous version, e.g. changes in the ASN.1 coding of an IE have changed the encoding of the complete message. Hence, if a correction of a function is done in this way, a correction might require updates for a product not using that particular function; e.g. a correction of a TDD function might require updates to FDD only products.

Now when most , if not all, of the errors have been corrected, new CRs must consider the backward compatibility to the previous version of the specification. The first step is to make sure that the CRs as far as possible only affects the functionality the CRs intend to correct. If this is not possible, e.g. due to that ASN.1 needs to be changed, the extension mechanisms built into the protocol shall be used. The backward compatibility is more important than the elegance of specifications, considering the stability of the specifications and the required timing of interoperable products.

3 Proposal

It is proposed that the above principles of working are adopted by TSG RAN. More specific, it is proposed that

1. The versions of Release 99 should be backward compatible with the previous version.
2. Each CR to a specification should have an analysis of the backwards compatibility aspects in order for TSG RAN to be able to assess the backwards compatibility problem of CRs.
3. The WGs of TSG RAN shall ensure that the CRs are done in such a way that they only affect the functionality it is intended to correct. In case the CR is correcting an ASN.1 message it may be required to use the extension mechanism in order not to affect other functionality.
4. TSG RAN may also decide that correcting a specific function will not be done in release 99. Correcting that function may then be done in a later release.