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Title:	Proposed methods on how to proceed on RRM aspects
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This document provides some background information on RRM and tries to clarify the current situation, outlining what has to be done by March 2000.
In order to stimulate discussion, some methods on how to proceed on RRM aspects within RAN are also proposed. It is expected that RAN#6 is able to provide clear guidance on how to proceed on RRM issues.

1.   Background

At RAN#2 the RRM issue was addressed: the outcome of the discussion is reported in Annex 1 (extract from RP-99174). It was agreed to produce a Technical Report within WG2 titled "RRM strategies" addressing the supported strategies for the UTRA protocols, and describing examples of algorithms for these strategies. The Scope of the Specification on RRM developed by WG4 was clarified as well as the WG4 responsibility on RF scenarios.

At RAN#4 the split of responsibilities between WG1, WG2 and WG4 was further clarified with respect to S25.302 (now TS25.302), S25.231 (now TS25.115 for TDD and TS25.225 for FDD), and S25.103 (now TS25.123 for TDD and TS25.133 for FDD): WG2 specifies what measurements shall be performed, WG1 specifies how to perform measurements, and WG4 specifies measurements requirements (see RP-99409 reported in Annex 2).

2.   Current situation

At the current RAN#6, the situation of the most relevant documents (all raised to V.3.0.0 at RAN#6) is as follows:

TS 25.123 (WG4)
TS 25.133 (WG4)
TR 25.922 (WG2)

Other documents related to RRM are the following (all TS are in V.3.0.0):

TS 25.302 (WG2)
TS 25.303 (WG2)
TS 25.304 (WG2)
TS 25.215 (WG1)
TS 25.225 (WG1)
TR 25.942 (WG4)

From the discussion that took place at this meeting, it is apparent that there are still some issues related to RRM that require further consideration. In addition, it was also noted that RRM issues involve experts from different WGs; this is also apparent from the above list of involved documents. Finally, also groups outside RAN may be involved in the discussion on RRM issues.

For example, the following topics require further consideration and alignment between WGs:
- Idle Mode Tasks (involved docs: TS25.123, TS 25.133, TR 25.922, TS 25.304)
- Connected Mode Tasks (involved docs: TS25.123, TS 25.133, TS 25.303, TS 25.331, TR 25.922)
- Measurement Requirement (involved docs: TS25.123, TS 25.133, TS 25.215, TS 25.225, TS 25.302)

3.   Proposal

The goal is to ensure that all sections of RAN Specification/Reports related to RRM issues are consistent, complete and correct by the next plenary of TSG RAN in March.
In order to achieve this goal, several possible solutions can be envisaged.
As a first step, RAN could encourage relevant experts to directly participate to all involved WGs. This was also suggested in the past and the achieved results were good even if not entirely satisfactory.
A further proposal would be to have an Ad Hoc meeting devoted to RRM issues: experts from all involved WGs are invited to participate. The objectives of this Ad Hoc meeting would be to check the consistency between the relevant documents, to identify areas that require further consideration and to develop a joint workplan on RRM issues per each WG in line with the agreed split of responsibilities. This Ad Hoc meeting could be held early in January so that there would be sufficient time for the involved WGs to finalize the identified activities on RRM by the March RAN plenary. In order to work efficiently at the proposed Ad Hoc meeting, it is necessary that all interested companies develop suitable input contributions, taking in to account the current status of the activity and formulating proposals on how to be compliant with the March deadline.
Moreover, since the RRM procedures are subject to continue improvement and elaboration, in order to ensure the consistency amongst the relevant documents also in the future, the RRM Ad Hoc within WG4 could be continued: the participation of WG2 and WG1 experts should be ensured.

ANNEX 1
(Extract from RP-99174)

<u>Radio Resource Management (RRM) specifications</u>
- RRM covers the following subjects:
  - Handovers (RRC connection mobility)
  - Dynamic Channel Allocation
  - Radio Link failure
  - Power management
- WG2 is responsible for defining the RRM strategies which need to be supported by the UTRA protocols. For this, WG2 will study the requirements coming from TSG SA. WG2 will produce an Technical Report titled "RRM strategies" which will describe the supported strategies for the UTRA protocols, and also describe examples of algorithms for these strategies.
- WG2 provides the results on the RRM strategies to the other TSG RAN WGs so that they specify the required functions in their specifications.
- WG1 is responsible for the necessary measurements in support of the upper layer procedures based on requirements from WG2.
- WG2 is responsible for defining the handover strategies and the necessary procedures which shall be defined as modular - i.e. tool box principle - . Handover strategies includes "rescue" handovers but also "traffic/capacity" handovers.
- WG3 is responsible for the network interfaces (Iu, Iub, Iur)

WG4 is responsible for the study of RF scenarios. This study should identify typical scenarios with the associated relevant figures - e.g. number of cells which can/need be monitored, number of radio paths, speed of variation of the channel, usefulness of link adaptation, etc -. WG4 is also responsible for defining the RF measurements necessary accuracy.

ANNEX 2

How to proceed with S25.103 and S25.231
(RP-99409)

Rationale:

- S25.302 Specifies what measurements shall be performed
- S25.231 specifies how to perform measurements;
- S25.103 specifies requirements related to the above measurements

Proposal:

1. According to rationale S25.302, S25.231, S25.103 should be synchronized with respect to the measurements process.
2. S25.231 Section 7.1.3.3.3 on "Measurement Requirements" (related to Section 7.1.3.3 on "Monitoring of cells on different frequencies") to be moved in S25.103

3. S25.231 Section 7.1.5.2.2 on "Measurement Requirements" (related to Section 7.1.5.2.2 on "Monitoring of TDD cells") to be moved in S25.103

4. S25.231 Section 8 "Radio Link Measurements": the requirements related to this section have to be covered in S25.103.

S25.231 Annex 1 Handover Scenarios to be removed since they are already covered in S25.103.