Agenda Item:	10.4
Source:	**Ericsson**
Title:	RANAP information elements definition
Document for:	Decision

1   Introduction

The purpose of this contribution is to propose the definition for RANAP information elements.

2   Discussion

The definition of RANAP information elements in ref [1] contains some inconsistencies and some definitions are missing. This contribution proposes to clarify these information elements. The changes compared to the information elements definitions in ref [1] are indicated with the change bars in the following chapter.

3   Information elements definition

ref [1] 9.2.2.x   Message type

Message type uniquely identifies the message being sent. It is mandatory for all elementsmessages.

ref [1] 9.2.2.x   RAB ID
[Editor's note: This definition needs to be harmonized with UMTS 23.10.]

This element uniquely identifies the radio access bearer over one Iu connection. It is used in all primitives that pertain to the radio access bearer. The radio access bearer identification has only local significance.
ID is to identify a particular radio access bearer in Iu.

ref [1] 9.2.2.x   NAS Binding Information
[Editor's note: This definition needs to be harmonized with UMTS 23.10.]

This element is provided at radio access bearer establishment. It contains application specific information, to be used by the remote NAS entity at the UE side. It may, for example, serve as the binding to a NAS call. This element information is a information is transmitted transparently to the RNCUE.

ref [1] 9.2.2.x   RAB parameters

The purpose of the RAB parameters information element is to indicate all RAB parameters for both directions, e.g. Quality of service (QoS) classes.

ref [1] 9.2.2.x   Transport address

This element is to be used for the user plane transport.

ref [1] 9.2.2.x   Iu transport association

This element is used to associate the RAB and the corresponding user plane connection.

ref [1] 9.2.2.x   Cause

The cause element is used to indicate the reason for a particular event to have occurred according to the cause code list.

ref [1] 9.2.2.x   Priority level and pre-emption indication

The Priority level indicates the priority of the request. The pre-emption indicators may (alone or along with the priority levels) be used to manage the pre-emption and retention functions.

[Note: It needs to be clarified how this parameter is in relation to priority and retention fields parameters already included with the Bearer parameters.]

ref [1] 9.2.2.x   RAB linking

This element is a common reference shared by a A group set of RABs which must be treated together as requested. The requested actions for the set of RABs shall be successfully either all established executed, queued or all rejected.

ref [1] 9.2.2.1 Location Identifier

Indicates location of the UE.

[Note: The UE Location Information is proposed to be used instead of this element. If the proposal is accepted, the Location Identifier in Message Contents chapter will be replaced with the UE Location Information.]

ref [1] 9.2.2.x   Permanent NAS Identity

This element is used to identify the UE commonly in UTRAN and in CN. RNC uses ID is common for mobile terminal and is used by the RNC to find check if SRB is already existing (from other NE) to other existing signalling connections the of this same UE (e.g. RRC or Iu signalling connections) when new radio access bearer is in establishment phase. Initially this is of the type of IMSI. The future usage is FFS.

ref [1] 9.2.2.x   CN Domain Indicator

This element i~~I~~ndicates to which C~~c~~ore N~~n~~etwork domain (~~MSC~~ CS or ~~SGSN~~PS) the signalling message is related to~~paging shall be directed~~.

ref [1] 9.2.2.x   IMSI

International Mobile Subscriber Identity~~,~~ uniquely identifies ~~a~~the subscriber.

Note: IMSI is specified in the TS 23.003.

ref [1] 9.2.2.x   Temporary UE ID

~~Temporary Mobile Subscriber Identity,~~This element is used to support the subscriber identity confidentiality. ~~for security reasons to hide the identity of a subscriber.~~

Note: TMSI is specified in the TS 23.003.

ref [1] 9.2.2.x   Paging Cause

~~Tells~~ This element indicates the cause of paging to the UE.

ref [1] 9.2.2.x   Trace Type

A fixed length element indicating the type of trace information to be recorded.

ref [1] 9.2.2.x   Trigger ID

A variable length element indicating the identity of the entity which initiated the trace.

ref [1] 9.2.2.x   Trace Reference

A fixed length element providing a trace reference number allocated by the triggering entity.

ref [1] 9.2.2.x   UE Identity

This element identifies the element~~s~~ to be traced i.e. the subscriber or the user equipment. ~~Indicates the identity of the UE.~~

ref [1] 9.2.2.x   OMC ID

A variable length element indicating the destination address of the Operation and Maintenance Center (OMC) to which trace information is to be sent.

ref [1] 9.2.2.x   Encryption Information

This element contains the user data encryption information (key(s) and permitted algorithms) used to control any encryption equipment at the RNC.

ref [1] 9.2.2.x   Chosen Encryption Algorithm

This element indicates the encryption algorithm being used by the RNC.

ref [1] 9.2.2.x   NAS ~~Bit String~~System Information

This element identifies system information that belongs to the non-access stratum (e.g. LAC, RA code etc). This information is transparent to RN~~R~~C.

~~The NAS information peace to be broadcast. The internal structure of this bit string is not known or analysed by the RNC, and is specified as part of the CN - UE protocols.~~

ref [1] 9.2.2.x   Broadcast Area

With each NAS System Information~~bit string~~, this element identifies the geographical area where to broadcast it.

ref [1] 9.2.2.x   Categorisation parameters

With each NAS System Information~~bit string~~, this element ~~to be~~ is used by the RNC to determine how to schedule the repetition cycle.

ref [1] 9.2.2.x   NAS PDU

This information element contains the CN – UE or UE – CN message that is transferred without interpretation in the RNC. Typically it contains call control, session management and mobility management messages.

ref [1] 9.2.2.x   Request Type
[Editor's note: This definition needs to be harmonized with UMTS 23.10.]

This information request the information type that to be reported from RNC, e.g. to report LAI and RAI of the current UE location. Other request types are FFS.

ref [1] 9.2.2.x   Location Information
 [Editor's note: This definition needs to be harmonized with UMTS 23.10.]

This information shows the location information that has been requested by the CN, e.g. LAI and RAI. Other types of location information are FFS.

~~ref [1] 9.2.2.xNAS Layer 3 Information~~

~~This is a variable length element used to pass radio interface messages from one network entity to another.~~

[Note: The NAS PDU is proposed to be used instead of this element. If the proposal is accepted, the NAS Layer 3 Information in Message Contents chapter will be replaced with the NAS PDU.]

ref [1] 9.2.2.x   User Plane Mode

This element indicates the mode of operation of the Iu User plane requested for realising the RAB.

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[Editor's note: It has been agreed that the editor will propose a definition for this.]

This element indicates the mode of operation of the Iu User plane requested for realising the RAB.

ref [1] 9.2.2.x   Paging Area ID

[Editor's note: It has been agreed that the editor will propose a definition for this.]

This element uniquely identifies the area, where the paging message shall be broadcasted.

ref [1] 9.2.2.x   Source ID
[Editor's note: It has been agreed that the editor will propose a definition for this.]

ref [1] 9.2.2.x   Target ID
[Editor's note: It has been agreed that the editor will propose a definition for this.]

ref [1] 9.2.2.x   Source RNC to Target RNC Transparent Container
[Editor's note: It has been agreed that the editor will propose a definition for this.]

This element is a container to be transferred transparently from the source RNC to the target RNC via CN node(s) during the Relocation procedure. The information contents are FFS.

ref [1] 9.2.2.x   Target RNC to Source RNC Transparent Container
[Editor's note: It has been agreed that the editor will propose a definition for this.]

This element is a container to be transferred transparently from the target RNC to the source RNC via CN node(s) during the Relocation procedure. The information contents are FFS.

ref [1] 9.2.2.x   Number of steps

Indicates the number of steps to reduce traffic in overload situation.

4   Conclusion and Proposal

It is proposed that the clarifications to the Information Elements definitions presented in the chapter 3 of this document will be introduced to the subchapters of 9.2.2 and to the Message Contents chapter 9.1.1 in the reference [1].

5   References

[1] 3GPP 25.413, UTRAN Iu Interface RANAP Signalling V1.2.2