

Agenda item : 6.1

Source : Mitsubishi Electric

Title : **Definition of Binding Id**

Document for : Approval

1. Discussion

Currently, in TS 25.401, Binding ID has been introduced without correlating it with the standardized parameters related to AAL2 and its signalling protocol (Q.2630.1). In order to avoid any confusion when interconnecting Node B and RNCs from different manufacturers, it is worth make it clear.

As shown in figure 6 of [1], Binding ID is used to link the AP and the transport network control plane, as a common reference which will be understood by both entities. It should then be mapped to the SUGR parameter used in the ESTABLISH.request primitive of Q.2630.1 (cf [2]). “This parameter carries a reference provided by the originating AAL type 2 served user and this reference is transported unmodified to the destination served user”.

Respectively to that, length of Binding Id shall then be limited to 4 octets. With this limitation agreed, the final size of Binding Id is ffs.

2. Proposal

Proposal 1

It is proposed to add the following text in section 2 and section 6.1.6.3 of [1]

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.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] Merged UTRAN Architecture Description V0.0.2

[2] UMTS 23.10 : UMTS Access Stratum Services and Functions

[3] UMTS 25.211: Physical channels and mapping of transport channels onto physical channels (FDD)

Editor's Note : [1] is a temporary reference only to ease the definition of what should be in the different sections of this document.

6.1.6.3 Binding identifier

Binding Identifier is used to initialise the linkage between ALCAP and Application Part (RANAP, RNSAP, NBAP) identifiers. Binding identifier can be used both in Radio Network Control plane Application Part protocols and in Transport Network Control Plane's ALCAP protocol.

Binding ID binds the Radio and Transport Network Control plane identifiers together. To ensure maximal independence of those two planes, the binding ID should be used only when necessary: Binding ID shall thus be used only in Radio Network Control plane Application Part messages in which a new association between the planes is created and in ALCAP messages creating new transmission links.

Binding ID for each transmission link shall be allocated before the setup of that transmission link. Reserved Binding IDs and the associated transport link shall be memorised by both peers of each reference point.

The Binding ID is sent on one direction using the Application Part protocol and is return in the other direction by the ALCAP protocol.

Binding ID should be copied in SUGR parameter of ESTABLISH.request primitive of Q.2630.1. In order to respect the specifications defined in [4], size of Binding Id shall not exceed 4 octets.

The binding identity shall already be assigned and tied to a radio application procedure when the first ALCAP message is received in a node.

Figure 6 illustrates how application instances of the Radio Network Control Plane and instances of the Transport Network Plane are linked together through the Binding Identifier in the set-up phase:

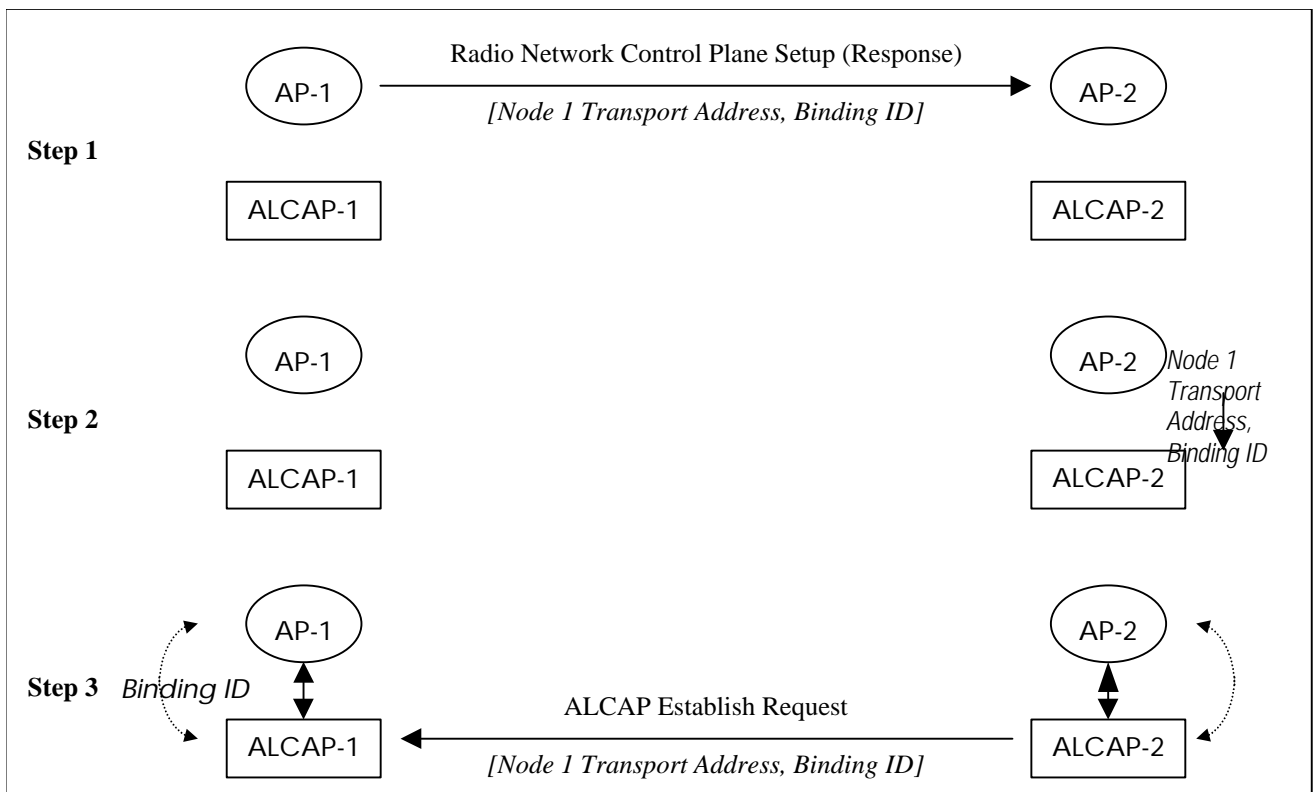


Figure 6 Usage of Binding ID

Step 1: Application Part AP-1 assign the Binding Identifier and sends a Radio Network Control Plane Set-up (Response) message (which of the two messages depends on the involved interface -

Iu/Iur or Iub). The message contains the originating node Transport layer address and the Binding Identifier.

Step 2: Among reception of the Radio Network Control Plane Set-up message, the peer entity AP-2 requests to ALCAP-2 to establish a transmission link. The Binding Identifier is passed to ALCAP-2

Step 3: ALCAP-2 sends an ALCAP Establish Request to the peer entity ALCAP-1. The message contains the Binding Identifier. The Binding Identifier allows correlating the incoming transport connection with the Application Part transaction in step 1.

The following table indicates the binding identifier allocating entity in each interface.

Reference point	Allocating entity	Application part message including Binding-ID
Iu	CN	Request from CN
Iur	DRNC	Response to the request from SRNC
Iub	Node-B	Response to the request from DRNC

Proposal 2

Add the following text in section 9.2.27 of [3]

9.2.27 Binding Id

The Binding ID is the identifier of an user data stream. It is allocated at Node B and it is unique for each active transport bearer to/from the Node B.

Size of Binding Id IE shall not exceed 4 octets.

3. References

[1] TS 25.401 v.1.2.1 UTRAN Overall Description

[2] Draft new ITU-T Recommendation Q.2630.1 AAL type 2 signalling protocol (capability Set 1), Geneva, March 1999

[3] TS 25.433 v.1.1.1 NBAP Specification