TSG-RAN Working Group 2 (Radio layer 2 and Radio layer 3) ***TSGR2#6(99)786***
Sophia Antipolis, 16-20th August 1999

Agenda Item: 14.4

Source: Hyundai Electronics Co. Ltd

Title: Proposal for the usage of Network Discriminator in System Information Message

Document for: Discussion and Decision

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1 Introduction

This document proposes to insert the 'Network Discriminator' field in System Information Message on BCCH.

2 Proposal to insert the Network Discriminator field

According to the OHG result[1], DS should be connected to ANSI-41 as well as GSM-MAP as a core network and MC should be connected to GSM-MAP in addition to ANSI-41. [Figure 1]

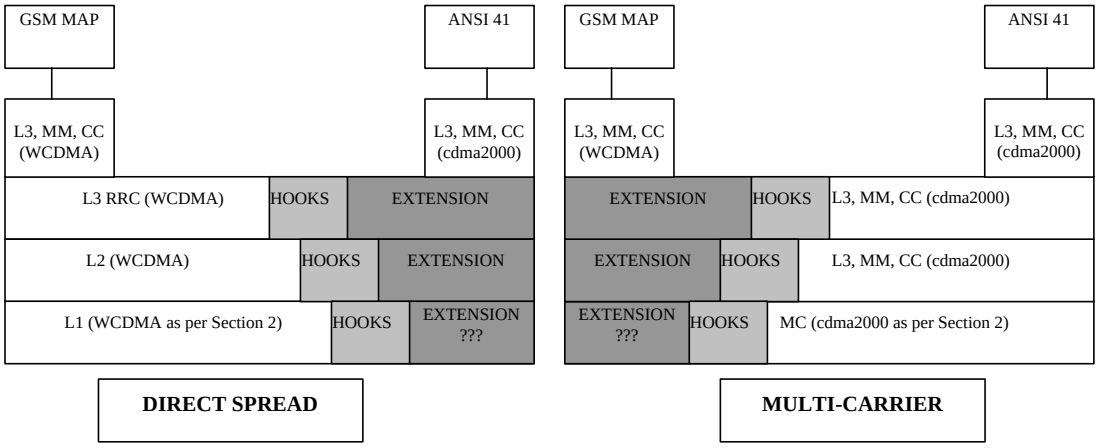
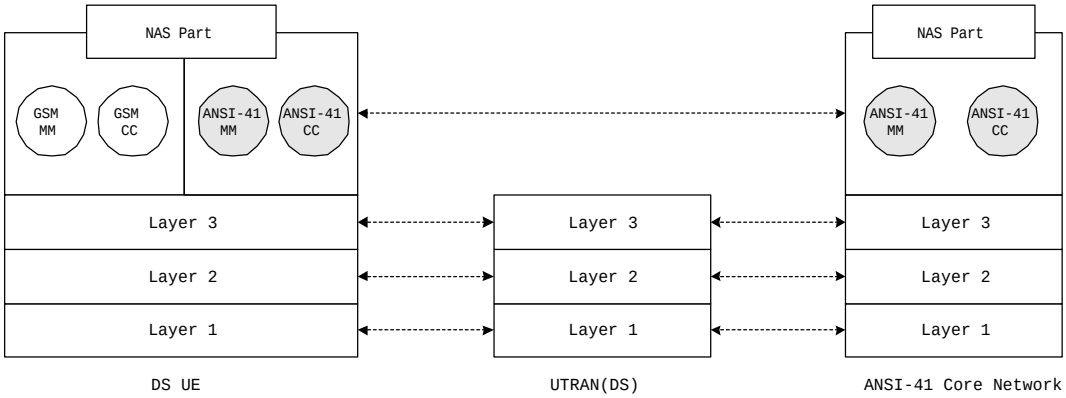
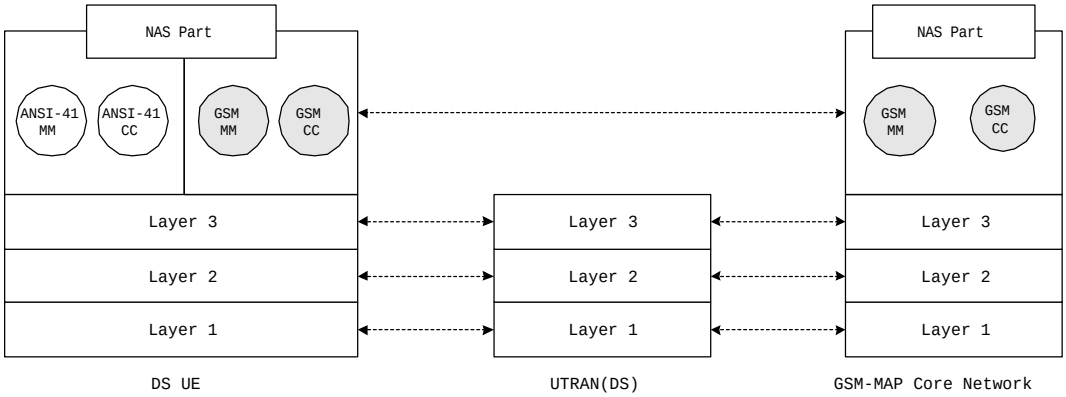


Figure 1. Protocol Structure for Implementing the Modular Concept

In case of DS being connected to GSM, L1, L2, and RRC can be used as defined in WCDMA standard and MM & CC of GSM can be used. However, in case of DS being connected to ANSI-41, L1, L2 and RRC of WCDMA should be used with HOOKs and EXTENSIONs, and MM and CC of ANSI-41 should be used for the call control and mobility management. This means DS based UE should have 2 sets of CC & MM protocol entities, and it has to choose the proper CC & MM set according to the serving CN. [Figure 2]
By the way, there is no facility to discriminate the serving CN in 3GPP specification[2]. Therefore, UE is impossible to choose the proper CC & MM set in idle mode.
In this proposal, we suggest to insert 'Network Discriminator' field in SYSTEM INFORMATION Message on BCCH. Using this information, UE in idle mode can acknowledge the serving CN and then invoke the proper CC & MM protocol entities.



(a) Protocol Structure of DS UE for connecting to ANSI-41 CN



(b) Protocol Structure of DS UE for connecting GSM-MAP CN

[Figure 2] Protocol Structure of DS UE

3 Reference

1. Harmonized Global 3G Technical Framework for ITU IMT-2000 CDMA Proposal – OHG Technical Frame work, May 28th 1999
2. TS 25.331 V1.1.0 (1999-06)

4 Proposal

4.1 Change proposal to TS 25.331

We propose to add a new field, ‘Network Discriminator’, in ‘SYSTEM INFORMATION’ message in chapter 10.1.6.1.

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
CN information elements	**Network Discriminator~~PLMN Identity~~**		**M**		
	PLMN Identity~~Network Discriminator~~		M		
	CN domain identity		M		For each Core Network Domain. Information must be included for at least one core network domain type.
	NAS system information		M		
UTRAN mobility information elements	URA identity		M		For each URA
	Information for periodic cell and URA update		M		*Note: not for each URA any more*
	Cell identity		M	The necessity and usage of cell identity is FFS.	
	Cell selection and re-selection info		M		

And, we propose to insert '10.2.1.6 Network Discriminator'.

10.2.1.6 Network Discriminator
Distinguish the CN whether it is ANSI-41 or GSM-MAP