Work Item Description

Title

Network Domain Security; IP network layer security (NDS/IP) for Release 6 ~~(formerly known as Network Domain Security)~~

~~This WID replaces WID "Network Domain Secuity" (SP-000420).~~

~~Togheter with WID "Network Domain Security; MAP application layer security" (S3-010275) it also replaces WID "Key Management for core network security" (SP-000301).~~

1   3GPP Work Area

X	Radio Access
X	Core Network
	Services

2   Linked work items

-          Related work is in ~~N1~~ RAN and GERAN~~N4 to specify the solutions developed by S3.~~ work groups (yet to be indentified)

3   Justification

There is a clear need to protect the IP based core network protocols for the control plane to protect the system against attacks.

There is also a need to protect IP based control plane protocols over Iu, Iur, Iub, Iupc and Gb. SA3 will evalute the need for security protection of the protocols over these interface and then extend NDS/IP to cover the relevant protocols/interfaces (if any).

4   Objective

The general objective is to develop security solutions for all IP based core network protocols which need protection. This notably includes GTP and control protocols used in IMS.

The security characteristics that have been identified as being in need of protection are confidentiality, integrity, and authentication. These will be ensured by standard procedures, based on cryptographic techniques.

The scope of this WI includes key management and distribution mechanisms for NDS/IP.

This work might also be extended to protection of the user plane.

~~It is foreseen that there may be a need for a network element authentication framework for later releases.~~ A further objective is to provide NDS/IP security protection to IP based control plane protocols over UTRAN and GERAN interfaces.

5   Service Aspects

None identified.

6   MMI-Aspects

None identified.

7   Charging Aspects

None identified.

8   Security Aspects

The work item is a security item.

9   Impacts

Affects:	USIM	ME	AN	CN	Others
Yes			X	X	
No	X	X	~~X~~		X
Don't know					

10   Expected Output and Time scale (to be updated at each plenary)

Meeting	Date	Activity
SA3#23~~CN/S3 joint meeting~~	July 2002~~June, 2000~~	NDS/IP Release6 WID defined~~Presentation by S2 of R'00 architecture~~
SA#17~~CN~~	September 2002~~July-August, 2000~~	WID approval~~Specification of the protocol stacks of the core network interfaces~~
SA3#24~~S~~	October	Requirement analysis of UTRAN/GERAN protocols and ~~Requirements~~

3	2002Autumn, 2000	capture GTP signalling security Feasibility study of GTP signalling security, including definition of work tasks and completion of planinterfaces in need of security protection. LS to relevant RAN/GERAN groups.
SA3#25S3#14	November 2002August, 2000	Evaluation of the scope for NDS/IP in UTRAN and GERAN Start feature specification of GTP signalling security
SA3#26S3#15	September, 2000TBD, 2003	CR to TS33210Start feature specification of GTP signalling security agreed by SA3
SA#19S3#16	March 2003November, 2000	CR to 33.210 presented Feasibility study, including definition of work tasks and completion of plan. Establishment of principles for NDS/IP architecture.SA plenary. If approved, the CR will create a Release6 version of TS 33.210 NDS/IP

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
33.xxx	NDS/IP	SA3				
Affected existing specifications						
Spec No.	CR	Subject		Approved at plenary#		Comments
33.210		NDS/IP		19		Release6

11   Work item raporteurs

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12   Work item leadership

TSG SA WG3

13   Supporting Companies

T-Mobil, Vodafone, Ericsson, Telenor, Nokia, Siemens, Motorola, AT&T Wireless, Lucent

14   Classification of the WI (if known)

X	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a   The WI is a Feature: List of building blocks under this feature

14b   The WI is a Building Block: