3GPP TSG SA WG3 Security – SA3#27   **S3-030139**

25 - 28 Feb 2003

Sophia Antipolis, France

Work Item Description

Source   **SA WG3**

Title   **Network Domain Security; Authentication Framework (NDS/AF)**

1   3GPP Work Area

	Radio Access
X	Core Network
	Services

2   Linked work items

- Network Domain Security; IP network layer security

3   Justification

For 3GPP systems there is a need for truly scaleable entity authentication framework since an increasing number of network elements and interfaces are covered by security mechanisms.

4   Objective

The general objective is to develop a highly scaleable entity authentication framework for 3GPP network nodes. The framework will be developed in the context of the Network Domain Security work items. This effectively limits the scope to the control plane entities of the core network.

The primary objective is for the authentication framework to provide entity authentication for the nodes that are using NDS/IP. This means that the authentication is developed to replace the (not so scaleable) default IPsec/IKE use of pre-shared secrets to authenticate the network elements. The authentication framework will therefore be based on profiled X.509v3 type of digital certificates and of profiled public key infrastructure technology and standards.

It is included into the work how actual operator CA's are organized feasibly and what are the trust relationships between them. Thus, feasible trust models and their effects are covered more closely. Additionally the work will present requirements for the used protocols and certificate profiles, so as it is possible for operator IPsec and PKI implementations to interoperate.

The scope of this work item will be in accordance with and base on the Feasibility study on NDS/AF (TR 33.810).

5   Service Aspects

None identified yet.

6   MMI-Aspects

None identified.

7   Charging Aspects

None identified yet.

8   Security Aspects

The work item is a security item.

9   Impacts

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

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

Meeting	Date	Activity
SA3#27	February, 2003	Work on NDS/AF general architecture and profiling of X509v3 certificates. Discussions on certificate distribution (and revocation) and the associated services and requirements. Broad agreement on TOC and scope of NDS/AF TS.
SA3#28	May, 2003	Progress work on NDS/AF TS: Work on trust model, CA hierarchy and RA issues Work on profiling of digital certificates. Work on certificate distribution (and revocation). Involve related 3GPP workgroups (if any).
SA3#29	July, 2003	Finalize trust model. Finalize certificate profile(s). Finalize certificate distribution. Prepare to submit NDS/AF TS to SA for information.
SA#21	September, 2003	NDS/AF TS submitted for information to SA plenary. Stage-3 work triggered in relevant groups (if needed).

SA3#30	October, 2003	Resolve any remaining issues. Submit NDS/AF TS for approval.
SA/CN#22	December, 2003	NDS/AF TS submitted for approval to SA plenary. First part of Stage-3 CR's approved.
SA/CN #23	March, 2004	Remaining part (if any) of Stage-3 CR's approved.

New specifications					
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
33.xxx	NDS/AF	SA3		SA#21	SA#22	
Affected existing specifications					
Spec No.	CR	Subject		Approved at plenary#	Comments

11   Work item raporteurs

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12   Work item leadership

TSG SA WG3

13   Supporting Companies

Nokia, Telenor, T-Mobile, Siemens, SSH Communications Security Corp

14   Classification of the WI (if known)

X	Feature (go to 14a)
	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: