

November 23 – 26, 2004**Shenzhen, P.R.China****Agenda Item:** IMS**Source:** Ericsson**Title:** WID: IMS security extensions**Document for:** Discussion/Decision

Work Item Description

Title: Security extensions for IP Multimedia Sub-system

1 3GPP Work Area

| | |
|---|--------------|
| | Radio Access |
| X | Core Network |
| | Services |

2 Linked work items

1. There are related work items in S3: "WLAN Interworking Security", "IMS Phase 2 - Lawful Interception in the 3GPP Rel-6 architecture"
2. There is a related work item in S2: "System enhancements for fixed broadband access to IMS"

3 Justification

Release 5 and 6 IMS access security solution was mainly designed for UMTS access networks. Even though the access security solution is access network independent, there are still important use scenarios in which the current solution is difficult or even impossible to use:

- Access networks that include NATs, such as fixed broadband access as currently specified in ETSI and ITU-T in the framework of next generation networking (NGN).
- IMS subscriber having (possibly third party provided) Internet access.
- IMS subscriber using 3GPP/WLAN interworking scenario 2 or 3.

Furthermore, IMS security architecture relies partly on underlying network security. For example, media is not protected end-to-end because the security architecture relies on encryption provided by access network. However, some of these new access networks cannot be trusted for media encryption.

TSG-S3 has prime responsibility for all security-related specification work in 3GPP. TSG-S3 needs to study if IMS access security solution needs to be extended in order to solve the above problems, and how potential extensions are done.

4 Objective

The objective with this WI is to further study security requirements and solutions related to alternative access paths to IMS. Special focus is put on NAT traversal between UE and P-CSCF, and media encryption.

5 Service Aspects

yes, the end-user shall be able to access the services located at the home IM-domain wherever the end-user may roam to. It shall also be possible to use different access technology to connect the "IP multimedia CN Subsystem" e.g. xDSL, wireline and Wireless LAN etc.

6 MMI-Aspects

yes, visibility and configurability. Issues like visibility of offered security level and user interaction shall be studied.

7 Charging Aspects

none identified

8 Security Aspects

yes, this WI issues security features

9 Impacts

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

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

| Meeting | Date | Activity |
|---------|------|----------|
| | | |
| | | |
| | | |

| New specifications | | | | | | |
|----------------------------------|-------|---|----------------------|---|-------------------------|--|
| Spec No. | Title | Prime rsp. WG | 2ndary rsp. WG(s) | Presented for information at plenary# | Approved at plenary# | Comments |
| | | | | | | SA3 should consider if a new TR on IP Multimedia Sub-system access security extension requirements is needed |
| | | | | | | SA3 should consider if media encryption should be documented in a new TS |
| Affected existing specifications | | | | | | |
| Spec No. | CR | Subject | | Approved at plenary# | Comments | |
| 33.203 | | Access security for IP-based services | | | | |
| | | Other specs may be identified as work progresses, e.g. stage 3 specifications | | | | |
| | | | | | | |
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| | | | | | | |

11 Work item rapporteurs

Ericsson, Bengt Sahlin

12 Work item leadership

S3

13 Supporting Companies

Ericsson, TBD

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

Stage 3: Protocol impact from providing IMS services via alternative access networks.