

3GPP TSG SA #35
Lemesos, Cyprus, 12th-15th March 2007

SP- 070249

Title: Mobility interworking between 3GPP and WiMAX systems

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Source: 3GPP TSG SA

To: WiMAX Forum, IEEE 802.16.

Cc: 3GPP: SA1, TSG RAN, GERAN

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Attachments: Relevant 3GPP work in progress on LTE and SAE.doc

1. Overall Description

Currently, 3GPP is undertaking long term evolution and architecture evolution. Important tasks of this long term evolution include reduced latency, improved system capability, reduced cost per bit, and higher user data rates. As part of this work, IP based 3GPP services will also be provided through various non-3GPP access technologies.

To further clarify which interworking scenarios and mobility requirements may exist regarding interworking between WiMAX and 3GPP systems, WiMAX Forum and IEEE 802.16 are invited to provide this input to 3GPP. In particular;

- 1) If known, with which of the 3GPP radio access systems (e.g. LTE, WCDMA, TDS-CDMA, GSM/GPRS/EDGE) is mobility interworking required?
- 2) If known, with which of the WiMAX radio access systems is mobility interworking with 3GPP radio access systems required?
- 3) Is there a preference for handover direction or is the requirement for equal performance in both directions (i.e. bidirectional handover)?
- 4) If available, are you able to provide an expected timeline for completion of this activity from a WiMAX Forum and IEEE 802.16 perspective?
- 5) Is tight coupling with 3GPP systems required (e.g. mobility based on approaches transparent to the UE such as GTP or PMIP, because the multimode 3GPP/ WiMAX technology terminal to be used in the intersystem operation is expected to be single radio), or is a loosely coupled approach to intersystem mobility sufficient?
- 6) What is the expected interruption time for handover between the technologies?

3GPP TSG SA has also tasked 3GPP TSG SA WG1 to work on the requirements from the 3GPP side. In addition, 3GPP TSG SA WG2 is responsible for the system architecture evolution.

A summary of ongoing LTE and SAE activities in 3GPP is enclosed for information.

3GPP TSG SA would be grateful if WiMAX Forum and IEEE 802.16 could consider the required interworking scenarios between WiMAX and 3GPP systems and provide this input to 3GPP TSG SA WG1 together with the expected timeline.

3. Date of Next 3GPP Meetings:

TSG SA WG1 #36	23-27 April 2007	Madrid, Spain
TSG RAN #36	29 May – 1 June	Busan, South Korea
TSG SA #36	4-7 June	Busan, South Korea

Relevant 3GPP work in progress on LTE and SAE.

Study work on the Evolved 3GPP system has been carried out in 3GPP TR 23.882

The SAE Work Item was started at SA#32 to document Stage 1 requirements in 3GPP TS 22.278 “Service requirements for evolution of the system architecture”

At SA#34 3GPP has agreed to specify the Stage 2 of the Evolved system architecture in two specifications:

TS 23.401 General Packet Radio Service (GPRS) enhancements for Long Term Evolution (LTE) access

- Specifies an evolution of GPRS to support LTE access and all the 3GPP accesses.

TS 23.402 3GPP System Architecture Evolution (SAE): Architecture enhancements for non-3GPP accesses

- Specifies the interworking with Non 3GPP systems and it allows for the usage of IETF option for some level of 3GPP mobility (mobility between SAE Gateways).

3GPP Technical Specifications and Technical Reports are accessible at the following location:

www.3gpp.org/specs/numbering.htm