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Source(s)	JUNHYUK SONG, JICHEOL LEE, YONG CHANG Voice: +82-31-279-3639 Samsung Electronics junhyuk.song@samsung.com
Re:	Re: IEEE P802.16e/D5a
Abstract	PEAP Clarification
Purpose	Discuss and Adopt as the baseline text
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PKM version 2

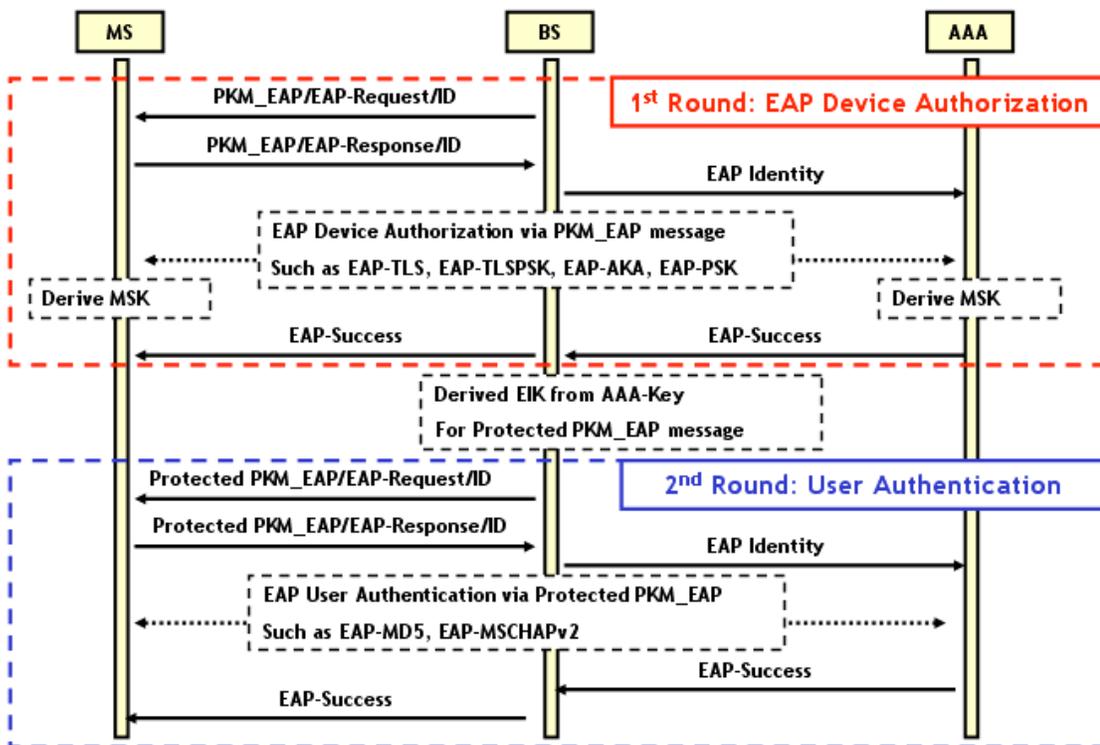
Protected EAP Clarification

JUNHYUK SONG, JICHEOL LEE, YONG CHANG
 Samsung Electronics

INTRODUCTION

Per decision in last meeting, D6 text adopted PKM Protected EAP message and EIK. It will protect subsequent EAP authentication messages encapsulated in PKM management message from possible forgery attack when RSA based Authorization executed. However current text is not clear about how Protected EAP message could be used in case of EAP only mode. In EAP only mode when EAP authentication method such as EAP-PSK or EAP-AKA is used as a device authentication method, MS and BS may run second round of EAP authentication method for user authentication by exchanging PKM Protected EAP messages. In this contribution we will specify the EIK derivation when EAP only mode is used.

Twice EAP example



Changes to 802.16e D6 text

7.2.2.2.2 EAP authentication

If a [RSA](#) mutual authorization took place before the EAP exchange, the EAP messages may be protected using EIK - EAP Integrity Key derived from pre-PAK (see 7.2.2.2.1). EIK and EEK are 128 bits long.

The product of the EAP exchange which is transferred to 802.16 layer is the AAA-key. This key is derived (or may be equivalent to the 512-bits Master Session Key (MSK)). This key is known to the AAA server, to the Authenticator* (transferred from AAA server) and to the MS. The MS and the authenticator derive a PMK (Pairwise Master Key) [and optional EIK](#) by truncating the AAA-key ~~after~~ [to 288+60](#) bits.

The PMK [and EIK](#) derivation from the AAA-key is as follows:

[EIK](#)|PMK = truncate (AAA-key, [288+60](#))

If more keying material is needed for future link ciphers, the key length of the PMK may be increased.

[Change Figure 133]

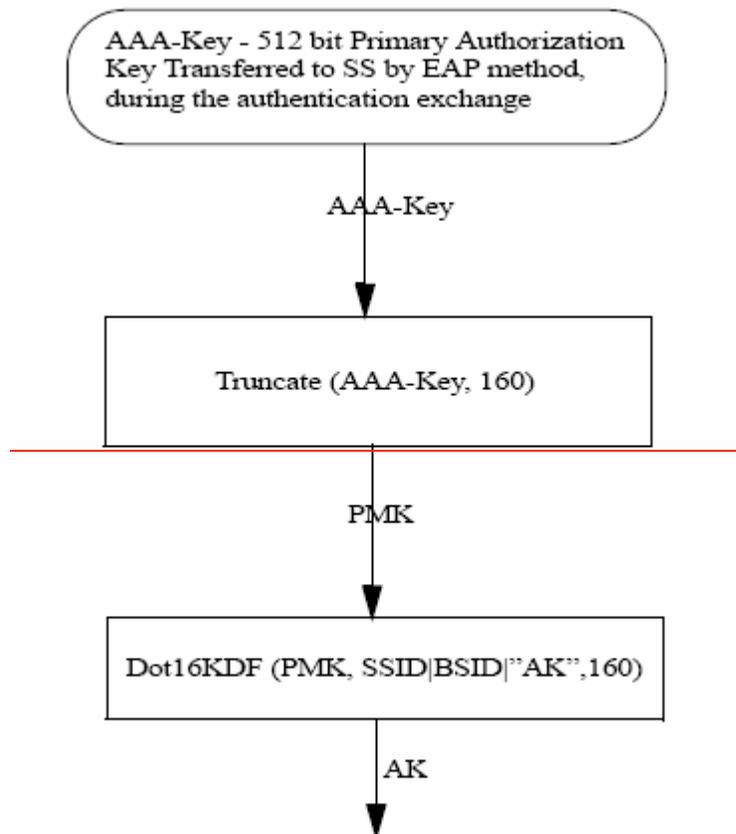
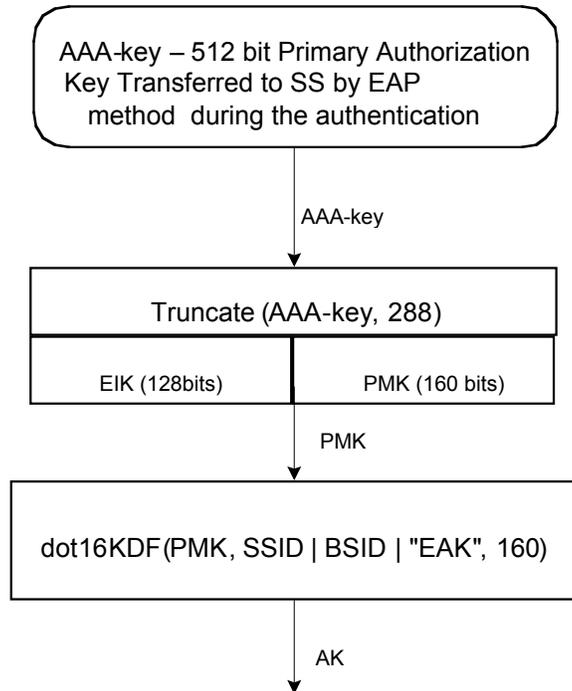


Figure 133—AK with EAP only authentication



[Figure 133-AK with EAP only authentication](#)