3GPP TSG SA WG3 Security — S3#19 **S3-010311**

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3GPP TSG-S4 Codec Working Group ***Tdoc S4-(01)0429***
TSG-S4#17, 4th – 8th June, 2001, Naantali, Finland

Title:	**Liaison Statement in Regards to Digital Rights Management**
Source:	**TSG-SA WG4**
To:	**TSG-SA WG3, TSG-T WG2**
Attachment:	**S4-010357 "Digital Rights Management for extended PSS in R5"**

Contact Person: David Pollington

E-mail: david.pollington@vodafone.com

SA4 would like to thank SA3 for their recent liaison in regards Digital Rights Management (DRM) for extended PSS. Further guidance is being requested from SA3 on this issue. SA4 would like to present three possible ways to approach Digital Rights Management for PSS and welcomes an open discussion with SA3 on ways SA4 could follow in implementing this capability. SA4 document S4-010357 is being sent as an attachment.

Of the three options identified, the third of these options proposes an intermediate approach, whereby a simple mechanism such as a copy right protection flag would be used to protect content. A full DRM solution would be considered for future releases. The validity of this approach is yet to be confirmed by content providers. We request any input that SA3 could provide on this subject.

3GPP TSG-S4 Codec Working Group ***Tdoc S4-(01)0357***
TSG-S4#17, 4th – 8th June, 2001, Naantali, Finland

Source: **Matsushita, Vodafone**

Title: **Digital Rights Management for extended PSS in R5**

Document for: **Discussion**

Agenda Item: **5**

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1. Introduction

During the PSM AHG meeting in Langen a new WI (R5) description for an Extended Streaming Service was drafted. One part of the justification for this WI was that the PSM group agreed on a future need to consider commercial factors, such as the importance of rights management, security and charging aspects for the commercial distribution of multimedia content using the PSS or alternate delivery mechanism (such as MMS, file download etc.).

Today most content is available in digital format and through the common Internet (wireless or wired) it is very easy to copy and share multimedia content thus undermining any commercial model for distribution. Through Digital Rights Management (DRM), however, it is possible to value content, control the distribution of the content, and thereby implement a variety of flexible business models - DRM is therefore seen as the key enabler for commercial content distribution services.

This document briefly outlines the current situation regarding Digital Rights Management (DRM) solutions considering issues such as availability, maturity, standardisation, etc. Based on this information different options for progressing the work on DRM are proposed for discussion.

2. DRM – The situation today

Today, several audio/visual content distribution services are available on the Internet. All of these systems are designed for protecting the (copy)-rights of the content against piracy and/or illegal usage whilst also enabling the commercial distribution of the content through the definition of usage rules. DRM is the technology to manage the requirements of both contents owners and end users.

Examples of available DRM solutions include:

- Microsoft's DRM component of Window Media Technology
- InterTrust
- IBM EMMS (Electric Music Management System)
- Convera
- Sony MagicGate

All the above DRM solutions provide similar functionality, e.g.

- Encrypting scheme (DRM itself might be independent from encrypting algorithm.)
- Defining "usage rules" and graceful management of user's operation for the contents according to pre-defined usage rules
- Robustness which resists crackers' attack to steal contents.
- ...

Due to the sensitive nature of security technology, most DRM solution providers are very unwilling to provide information on the algorithms they use and hence it has not been possible so far to develop or converge on a single standardised DRM solution in the Internet world.

An alternate approach that has been taken by MPEG is to define a framework for such DRM technologies. IPMP provides hooks for DRM, but does not specify the actual algorithms and/or implementation. Hence interoperability between different (IPMP compliant) DRM solutions is not achieved. Currently an extension of IPMP, to support e.g. flexible download of IPMP tools, is under discussion in MPEG.

There is another activity which impacts DRM, that is SDMI (Secured Digital Music Initiative). SDMI consists of contents owners, audio player manufacturers and IT companies. SDMI has not defined API's or protocols, but has already defined some requirements for music delivery in a secured content delivery system.

3. DRM – How to move forward?

In the following we would like to present three possible ways forward regarding DRM and welcome an open discussion on which way(s) SA4 wants to follow.

1. Standardize a DRM solution for multimedia content delivery in 3GPP.
   - Whilst the principal aim would be to develop a DRM solution for PSS, the solution should also be applicable to other delivery mechanisms such as MMS and file download (TCP/IP).
   - The solution could be based on existing technology (used in the Internet space) with perhaps the introduction of proprietary 3GPP elements such as a tie-in with the USIM

2. Provide an open, flexible and adaptive framework for various DRM solutions and related issues (e.g. based on or similar to IPMP).
   - Define a DRM operation reference model for 3G multimedia content delivery services
   - Define usage rules which are recommended for 3G multimedia content delivery service, i.e. license move functionality should be provided, valid duration definition might be provided.
   - Define operation rules which are specific for 3G such as the recommended rule for content transfer interruption and recovery.
   - and so on.

3. Do only very little in R5 and shift DRM work to R6 or later.