

## **0 Attributes, Criteria and Considerations**

- 0.1 *Defintion of "scheme": Method or system or technology for conveying rights as defined by the ARDG Goals defined in Section 1.*
- 0.2 **NOTE: Items were renumbered between r7 and the final version**

## **1 ARDG Goals**

- 1.1 How does the scheme meet stated ARDG goals: "addressing security issues arising from the conversion of protected, copyrighted commercial audiovisual content from digital to analog format and reconversion to digital format."?
- 1.2 How does the scheme carry rights signaling information from protected digital sources across analog interfaces and back into a digital sink.

## **2 Capabilities of the Scheme**

- 2.1 What states does and can the scheme carry?
- 2.2 In the analog space, how are the rights carried?
- 2.3 What is the technical mechanism by which the rights signaling insertion technology determines the appropriate rights states to apply to the content?
- 2.4 To what extent does the rights signaling scheme have the capacity to replicate the rights states of the protected digital content?
- 2.5 Is a mandate required for the content usage rights signaling, detection and interpretation?
- 2.6 Does the scheme require an anticircumvention mandate in order to be reasonably effective?
- 2.7 Is protection consistent across IT and CE platforms?
- 2.8 What is the reliability of the scheme under ideal conditions? Under normal operating conditions, for example in a consumer system? Under attack?  
(Reliability is defined in terms of the rate of misinterpretation of the rights or the failure to detect the rights.)

## **3 Robustness**

- 3.1 In what form or aspect is the scheme itself upgradeable and/or renewable?
- 3.2 What is the upgradeability/renewability mechanism?

- 3.3 What is the mechanism and cost (dollars, cpu cycles, gates, etc.) of known circumvention?
- 3.4 Have the specifications been published and/or reviewed? If so, where?
- 3.5 How does the system address known circumventions?

#### **4 Side Effects**

- 4.1 To what extent, considered purely as a technical matter, and considered apart from rights-allocation choices made by the content owner or distributor does the scheme create side effects in the use of material?
- 4.2 Does the scheme have a mechanism apart from the rights signaling method to convey the rules and conditions to the consumer?
- 4.3 Will the scheme have a mechanism for indicating to the consumer when improper behavior is attempted?
- 4.4 Extent to which the scheme's effects are perceptible to consumer, such as visibility and audibility of the scheme.
- 4.5 Does the scheme increase the exposure to malicious attacks of systems owned by the consumer? E.g. Disable equipment, harm to media, denial of service, etc.
- 4.6 Does the scheme increase the cost and/or complexity of a digital broadcast system serving as the source for the content? E.g. special video handling, additional new fields in an existing digital path that are transcoded directly to the analog, etc
- 4.7 Does the scheme increase the cost and/or complexity of a content mastering/creation system serving as the source for the content?
- 4.8 Does the scheme increase the cost and/or complexity of digital broadcast operations serving as the source for the content?
- 4.9 Does the scheme increase the cost and/or complexity of content mastering creation operations serving as the source for the content? E.g. special video handling, additional new fields on digital media that are transcoded directly to the analog, etc

#### **5 Impact on Legacy Devices or on Material Not Protected by the Scheme**

- 5.1 Does any aspect of the scheme inhibit the end user's equipment or network from playing or recording audio or video content for which copy protection was not asserted

- 5.2 What is the impact of the scheme on legacy devices (new content and new devices on or with legacy devices)?
- 5.3 What is the impact of the scheme on the use of legacy content with new devices?

## 6 Privacy

- 6.1 To what extent does the scheme require the disclosure of personally identifiable information from a user to the service or content provider(s)?

## 7 Scheme Documentation

- 7.1 Is the specification for the scheme complete enough as to meet generally accepted requirements for a submission to standards bodies?

## 8 Contractual Requirements

- 8.1 Does the scheme embody IP which requires a license? If so, what are the terms of the license for the use of this technology in this application? Does anything in the license effect the availability of the technology in this application?
- 8.2 Are the contractual requirements affecting the technical aspects of the proposal, if any, completely described a priori in non-confidential documents?
- 8.3 What mechanisms, if any, are there for contractual change of technical requirements?
- 8.4 To what extent, if any, is the solution available solely for the purposes set forth in 1.1 (as opposed to part of a package with other rights and obligations)?

## 9 Current and Future Capability

- 9.1 What is the maturity of the scheme?
- 9.2 Is the scheme of sufficient maturity that the function, efficacy, and resource requirements have been confirmed by field trials or other appropriate testing?
- 9.3 Have the results been shown to be reproducible by entities other than the scheme developers?
- 9.4 How will the scheme adapt to future content formats (codecs, scan rates, etc)?
- 9.5 To which existing analog video standards (e.g. 1080i, VGA, 525i, 525p, 625i etc.) is the scheme applicable?

Analog Reconversion Discussion Group  
Analysis Matrix

- 9.6 Is the scheme technically capable of interoperation with or use in connection with other systems?
- 9.7 Does the scheme stand on its own as a solution to the issues set forth in 1.1, or is it part of a content protection solution that requires adopting additional technology?

**10 Performance/Cost**

- 10.1 What is the estimated gate count and/or CPU resources required to implement the scheme, including the gate count and/or CPU resource changes in other system functions required to support the scheme's operation?
- 10.2 What are the costs as a percentage of total resources?
- 10.3 What other system costs are associated with the scheme?
- 10.4 Does the scheme require implementation in multiple locations within the system? If so, please explain.
- 10.5 Is the implementation cost comparable across IT and CE platforms? If not, please explain.

**11 Certification**

- 11.1 Are there certification requirements? If so, what are they?