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To Mr. Sh. Anil Kumar, Bhardwaj, Advisor (B&CS), TRAI
By emails: advbcs-2@traf.gov.in ; jtadv-bcs@traf.gov.in

Re: **THE TELECOMMUNICATION (BROADCASTING AND CABLE) SERVICES
INTERCONNECTION (ADDRESSABLE SYSTEMS) (FOURTH AMENDMENT) REGULATIONS,
2022 (Consultation Paper No. 12/2022)**

Synamedia would like to thank TRAI, Telecom Regulatory Authority of India, for the opportunity to contribute to the the Draft Regulations 2022, and the System Requirement for Digital Right Management (DRM).

1. Introduction

Synamedia has been built on the foundation of two well-known companies: Scientific Atlanta and NDS Limited, which were both acquired by Cisco Systems Inc. In 2018, Synamedia was launched as an independent company stemming from its pioneering expertise and leadership for over 30 years of servicing the sports and media entertainment industries with the most advanced broadcast security and technology solutions.

Today Synamedia is the largest global provider of video solutions with over 200 pay TV and media customers worldwide. Synamedia is an industry leader in piracy intelligence, content protection and anti-piracy technology, with 30+ years of experience in protecting content and disrupting pirate activity.

2. Suggested Amendments

We have carefully read the proposed regulations and in accordance with the hearing procedure, attached to this letter are two tables summarizing the issues in which Synamedia believes that there is a reason to introduce amendments to the regulations language.

Format for stakeholders' response on issues related to 'System Requirement for Digital Right Management (DRM)' on issues other than those proposed in this CP

| General Comments on the Draft Regulations 2022 | | | |
|---|--|--|--|
| | regarding an IPTV system with STBs. There are multiple cases in the industry of IPTV having different meanings, starting from pure broadcast over IP (multicast) with CA to a pure OTT system with DRM but in a managed | | |
| 1 | It is necessary to clarify if MAC ID used in the text refers to the client's MAC address or something else. If this is the | | |
| 2 | MAC address, in most cases, it is not | | |
| 3 | the term 'DRM', a security system managing content consumption licenses provisioning to the client devices, and the term 'DRM system', which manages the devices and decides which clients are eligible to receive the licenses and on which | | |

Table 1 - Proposed DRM Requirements for SMS - Irrelevant for Synamedia. No comments.

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Table 2 - Proposed DRM Requirements for Conditional Access by Subscribers and Encryption

| S no | Clause number of Draft Regulations 2022 | Do you agree with the Draft Regulations proposed in this CP (Yes/No) | Reasons with full justification for your response |
|------|---|--|---|
| 1 | 2 | No | Remove un-editable and not allowing altering the logs - this is possible in theory to generate fully protected logs using technologies like blockchain or ledger databases. However, this is a very expensive approach that the regulator shouldn't require. The DPO and DRM provider should enforce controlled access to the logs, so only authorized personnel can access the logs. Only the logging application should have the writer write the logs. All other users can only read the logs. |
| 2 | 3 | No | In some cases, like for testing purposes, the UI or other means should allow authorized personnel to manage the client devices. |
| 3 | 6 | No | Irrelevant for DRM which is cardless by its nature |
| 4 | 7 | No | Much of this belongs to the Control Plane that drives the DRM and not the DRM per se. |
| 5 | 8 | No | Independently from whom? Besides, DRM by itself can't detect piracy, it should be notified by some other parts of the ecosystem about pirate devices that need to be blacked out. |
| 6 | 11 | No | Again, it's about the entire ecosystem and not DRM itself. Keeping not-editable logs for several years incurs very significant costs. |

| | | | | |
|---|-------|----|----|---|
| 7 | | 13 | No | DRM doesn't deliver channels. It is not aware of the channel names, LCN, etc. In the HE DRM may encrypt content, but mostly it controls license delivery to the requesting client devices. |
| 8 | | 14 | No | Probably doesn't belong to DRM |
| 9 | | 18 | No | Not sure the regulator should state such requirement. DPO should negotiate the numbers with the DRM vendor. |
| 10 | | 21 | No | Hybrid STB should be defined - not clear what is meant. Is DRM for IPTV and something else for OTT? Every application should regulate access to its content independently, so the content decryption keys are only delivered in licenses of the system that delivers the content. |
| 11 | | 22 | No | Not sure it's a relevant requirement |
| 12 | | 26 | No | In my opinion Bouquet is irrelevant for DRM system |
| 13 | | 28 | No | Pure DRM may be just a slave of SMS and not have any DB at all |
| 14 | | 30 | No | Is this about the key rotation or license renewal period? If the former, this is probably not feasible in the current systems in the industry. The latter is possible but in big deployments creates a lot of traffic between the clients and the HE. |
| 15 | 33-37 | | No | Perhaps a separate IPTV clause is required - not directly related to DRM |
| 16 | | 37 | No | Too strong requirement, preventing features like Catch-up or Start-over. In modern systems client-only PVR incurs significant cost addition to the STBs. |
| 17 | | 38 | No | A mix of loosely bound requirements: a) second part actually prevents PVR b) limits implementation of a home gateway c) DRM can't prevent putting a camera in front of the TV screen and capture the video d) - f) OK |
| 18 | | 40 | No | whenever required instead of 'regular intervals' |
| 19 | | 41 | No | this is for DPO not DRM |
| 20 | | 43 | No | not clear at all |
| 21 | | 44 | No | not related to DRM |
| 22 | | 45 | No | this really limits the Operator to deliver content only to STBs. Most of the Operators in the world and in India want their DRM protected content to be delivered to mobile devices as well. |
| 23 | | 48 | No | DRM can't distinguish between Operator's (DPO's) ads and the ones coming from third party |
| 24 | | 49 | No | another statement above allowed client side PVR, which contradicts this statement |
| 25 | | 51 | No | This is how the content distribution works in many cases |
| Table 3 -Fingerprinting Requirements Under DRM | | | | |

| S no | Clause number of Draft Regulations 2022 | Do you agree with the Draft Regulations proposed in this CP (Yes/No) | Reasons with full justification for your response |
|---|---|--|--|
| 1 | 1 | | not related to DRM, rather to the STB app |
| 2 | 2 | | same |
| 3 | 5 | | same |
| 4 | 6 | | there is no VC in DRM |
| 5 | 8 | | application, not DRM |
| 6 | 14 | | for anti-piracy the client may randomize the times of the FP on each device, therefore the schedule can't be provided. |
| 7 | 15 | | application, not DRM |
| Table 4 - STB Requirements for DRM for IPTV services | | | |
| S no | Clause number of Draft Regulations 2022 | Do you agree with the Draft Regulations proposed in this CP (Yes/No) | Reasons with full justification for your response |
| 1 | 1 | | Which STBs? |
| 2 | 5 | | unrelated to DRM |
| 3 | 6 | | the requirement is not clear. 'Messages of length of 1 to 120 or more characters shall be supported'? |
| 4 | 13 | | not related to DRM |
| 5 | 14 | | probably the application, not DRM |
| 6 | 15 | | there are many commands not related to security/DRM that STB can fetch from other sources |
| 7 | 17 | | Not sure what is meant by authorization keys here |
| 8 | 18 | | This is not what modern STBs and Operators offer. There can be a App Store with a limited set of allowed Apps. |
| 9 | 21 | | It's again about blocking OTT, which contradicts the common modern trend |
| 10 | missing | | secure boot, secure load |