D C I Digital Cinema Initiatives, LLC

Response To Industry Inquiries Regarding The
Digital Cinema Object-Based Audio Addendum

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Digital Cinema Initiatives, LLC, Member Representatives Committee

The *Digital Cinema System Specification* (DCSS) defines a projection booth architectural model centered on a single Security Manager (SM) contained within a single Media Block (MB) specified as the Image Media Block (IMB). This IMB/SM-focused design enables a single MB to perform all security-critical functions (such as Key Delivery Message (KDM) decryption, media decryption and forensic marking) and conversely, avoids the promulgation of such functions across multiple MBs.

This was a decision made by DCI as a key characteristic of the DCSS architecture over a decade ago – purposeful in that it avoids the complexity and security risks of having multiple MBs performing security-critical communications (such as exporting KDM content keys).   While there have been certain new flexibilities enabled to respond to industry needs (such as "special auditorium situations" to enable multiple projectors), the basic tenants constraining the projection booth to an integrated MB/SM have not been relaxed. These tenants include the requirement that the projection booth contain a single MB – the IMB (section 9.4.1, item #1), and an overt prohibition of there being any other type of MB (section 9.4.2.3, second bullet). Projection booth equipment configurations that violate either of these requirements are not compliant to the DCSS.

However, DCI understands there is always a need to consider technological evolution and innovation and enable new exhibition experiences. For example, DCI recently issued the *Digital Cinema Object-Based Audio Addendum*, providing basic requirements for how this new essence type can be accommodated within DCI compliant architectures. DCI recognizes the potential for inconsistencies between Object-Based Audio Essence (OBAE) requirements and the DCSS, and the need to enable efficient implementations – while preserving the fundamental architectural tenants important to maintaining security. DCI is currently developing errata to accommodate OBAE and multiple projector implementations based on multiple MBs, including the required use of multiple KDMs in such instances.