

MOTION PICTURE ASSOCIATION

GOALS FOR DIGITAL CINEMA

August 31, 2000

The member companies of the Motion Picture Association believe that the introduction of digital cinema represents the greatest opportunity for enhancing the theatrical film experience since the introduction of sound and the advent of color. The conversion from photographic film distribution and display to an all-digital system has the potential of providing real benefits to theater audiences, theater owners, filmmakers, and feature film distributors. But in order for these benefits to be fully realized, digital cinema must be defined, standardized, and implemented in a way that ensures that the benefits accrue to all stakeholders.

The MPA member companies have been involved in public demonstrations of prototype digital cinema systems. We have also held meetings with equipment manufacturers, service suppliers, theater owners, and the creative community to better understand the views of others concerning the implementation of digital cinema. The MPA and its member companies have also participated in the Society of Motion Picture & Television Engineers (SMPTE) Digital Cinema DC28 engineering study groups in the preparation of their reports on considerations in the standardization of digital cinema. Through these activities and the dialogue with other stakeholders, we have developed a list of ten goals that we believe are critical to the successful implementation of a digital cinema system that provides real benefits to all stakeholders. These goals consist of the following:

1. **ENHANCED THEATRICAL EXPERIENCE** - The introduction of digital cinema must be used by the motion picture industry as an opportunity to significantly enhance the theatrical film experience and thus bring real benefits to theater audiences.
2. **QUALITY** - The picture and sound quality of digital cinema should represent as accurately as possible the creative intent of the filmmaker. To that end, its quality must exceed the quality of a projected 35mm "answer print" shown under optimum studio screening theater conditions. Any image compression that is used should be visually lossless.
3. **WORLDWIDE COMPATIBILITY** - The system should be based around global standards so that content can be distributed and played anywhere in the world as can be done today with a 35mm film print.
4. **OPEN STANDARDS** - The components and technologies used should be based on open standards that foster competition amongst multiple vendors of equipment and services.
5. **INTEROPERABLE** - Each of the components of the system should be built around clearly defined standards and interfaces that insure interoperability between different equipment.
6. **EXTENSIBLE** - The hardware used in the system should be easily upgraded as advances in technology are made. This is especially important in evolving to higher quality levels.
7. **SINGLE INVENTORY** – Once a consensus on digital cinema standards is reached and implemented, upgrades to the system should be designed so that a single inventory of content can be distributed and compatibly played on all equipment installations.
8. **TRANSPORT** – The system should accommodate a variety of secure content transport mechanisms, including electronic as well as a physical media delivery.
9. **SECURE CONTENT PROTECTION** – The system must include a highly secure, end-to-end, conditional access content protection system, including digital rights management and content watermarking, because of the serious harm associated with the theft of digital content at this stage of its distribution life cycle. Playback devices must use on-line authentication with the decrypted content files never accessible in the clear.

10. **REASONABLE COST** - The system standards and mastering format(s) should be chosen so that the capital equipment and operational costs are reasonable. All required technology licenses should be available on reasonable and non-discriminatory terms.

In addition to documenting these goals, the MPA member companies are preparing a document that more specifically outlines a consensus view of the System and Performance Requirements for Digital Cinema. This document will be posted at a later date on the MPA digital cinema web site located at <http://www.mpa.org/dcinema>. Comments on these documents can be directed to the Motion Picture Association's Office of Technology by sending e-mail to: dcinema@mpaa.org.