

Enhanced Digital Cinema

The EDCINE project is focussing on the optimisation, enhancement and inter- operability issues of JPEG2000/MXF based Digital Cinema.

EDCINE will optimise and improve the DCI specifications when it comes to quality, robustness to transmission errors, content security, stereoscopic imaging, live events and transcoding for digital archiving and interactive access for various devices.

All optimisations will be validated through a new quality assessment methodology with real users in real cinemas.



Research Areas	Content streaming to cinemas	Advanced movies experience beyond DCI	Archives and access to archives
Format Tools	✓	✓	✓
Security & DRM	✓	✓	✓
Robust Transmission	✓	✓	✓
Quality Assessment	✓	✓	✓

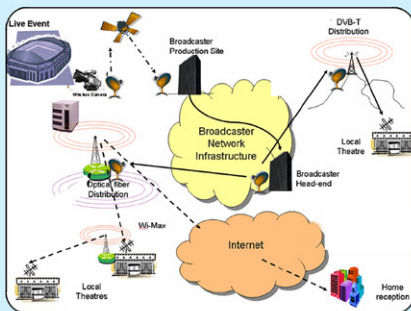
Beyond DCI

EDCINE is investigating the future of cinema with stereoscopy, high-speed motion, viewer interaction 3D surround sound, special hearing impaired sound, and compatibility with live event transmission.



Streaming to cinema

Digital movies are stored as large files and sent to cinemas on hard discs. EDCINE is studying how to transmit them by streaming, the way images are sent to our TV sets. This will lower costs and open cinemas to concerts and other live events.



Cinema archives

EDCINE is investigating how to store, archive, retrieve, transport, and replay old films while keeping the best quality from the many existing formats, frame rates, and sound systems used at production time.

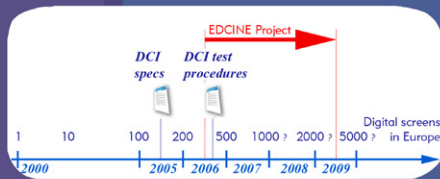


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History of digital cinema

The audio industry switched from Vinyl to CD in ten years. The cinema industry is supposed to take twenty years to convert the 100,000 cinemas in the world to digital technologies.

The first percent of the work is done...



What is the DCI?



- The *Digital Cinema Initiatives* is a joint venture of the "big 7" Hollywood studios (Disney, Fox, MGM, Paramount, Sony, Universal and Warner Bros) created in 2002.
- The goal is to establish an open architecture for digital cinema.
- The criteria are performance, quality and interoperability.

What is JPEG2000 ?

JPEG2000 is the image compression method used for Digital Cinema.

- International standard, free of licences and royalties.
- Each image is compressed independently.
- Extremely good quality
- Colour reproduction accuracy.
- A single compressed file contains both 2K and 4K resolution images.







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EDCINE Partners

University and research centers

-  Fraunhofer-Gesellschaft
-  Université catholique de Louvain
-  Università degli Studi di Perugia
-  Université de Poitiers

Industrial and private companies

-  Communauté Urbaine du Grand Nancy
-  Deutsche Telekom AG
-  Digilab 2000
-  Thomson Grass Valley France.
-  MOG Solutions
-  TDF
-  Thales Communications France
-  Thomson R&D France
-  Trinnov Audio
-  Winetworks
-  XDC

Films Archive

-  Cinémathèque Royale de Belgique

