

Dolby Surround Technology

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Abstract:

Dolby Laboratories Inc. was found by Ray Dolby. He joined a small team of Ampex [Ampex Corporation in Redwood City, CA] engineers dedicated to inventing the world's first practical video tape recorder, which was introduced in 1956. In 1965 he found his own company, Dolby Laboratories, Inc. in London.

Dolby Laboratories introduced **Dolby A** in 1965, a noise reduction method originally developed for professional recording studios, the movie industry saw an opportunity to reinvent the optical track

Even Dolby A couldn't compensate for the level of noise if more than two optical tracks were put on the film. A major breakthrough in surround sound came when **Dolby Stereo** was created.

Using an amazing process called *matrixing*, Dolby devised a way to use the two optical lines on the film to create four distinct channels of sound:

- Left
- Right
- Center
- Rear

Quite possibly the most popular of the digital formats is **Dolby Digital**.

Dolby Digital uses the space between the sprocket holes to encode information.

Dolby Digital uses six tracks:

- Center
- Left
- Right
- Left surround
- Right surround
- LFE (low-frequency effects)

This configuration is commonly referred to as 5.1, for five main channels plus an effects channel.

The newest Dolby format, **Dolby Digital Surround EX** was introduced in 1999, and adds a third surround channel to the Dolby Digital format

Dolby Products are classified on 4 broad categories:

- Analog Recording Techniques
- Digital Coding
- Film Sound
- Consumer Surround Sound

The other popular surround sound manufacturers for film include:

- DTS (Digital Theater System)
- LucasFilm's THX
- SDDS (Sony Dynamic Digital Sound)

References:

- www.dolby.com
- www.surroundassociates.com
- www.cinenow.com
- www.hometheaterhifi.com
- www.filmsound.org
- www.recording-history.org
- www.mtsu.edu/~smpete/timeline.html
- www.thx.com
- www.dtsonline.com

Conclusions

The presentation covers an overview of the Dolby Film products. A brief introduction to the film sound is done which then proceeds with to the evolution of the Dolby products in film. The presentation gives a basic understanding of some of the Dolby products.