SOUND&VISION

The Lowry Process

Each frame of the film negative is scanned for 4 seconds in a clean-room environment at 4K resolution, which gives a horizontal pixel count of 4,096 (compared with 1,920 pixels in the HDTV 1080i format).

Data is stored on 6-terabyte (6,000-gigabyte) servers, with a total of 378 terabytes connected on an extremely fast network.

Images are reviewed to determine what needs to be done to the movie. Processing is done automatically using complex algorithms on an array of 600 dual-processor Macintosh G5 computers, again connected on a fast network.

Each of the 172,000 individual frames that make up a 2-hour film is processed individually and the results fed to yet another server frame by frame.

Once reviewed, the parameters of some scenes are adjusted, and the scene is run again. A touch-up department does any final nonautomatic work by hand.

The result is a “digital negative” every bit as good as the camera negative — but without the wear, tear, and deterioration.

The digital negative is then output on film or downconverted to standard-definition for DVDs or high-definition (in any desired format) for HDTV broadcast, high-def DVDs, or digital cinema. — *J.K.*