Managing Color in the Mastering Process

Robert Hopkins Sony Pictures January 19, 2002

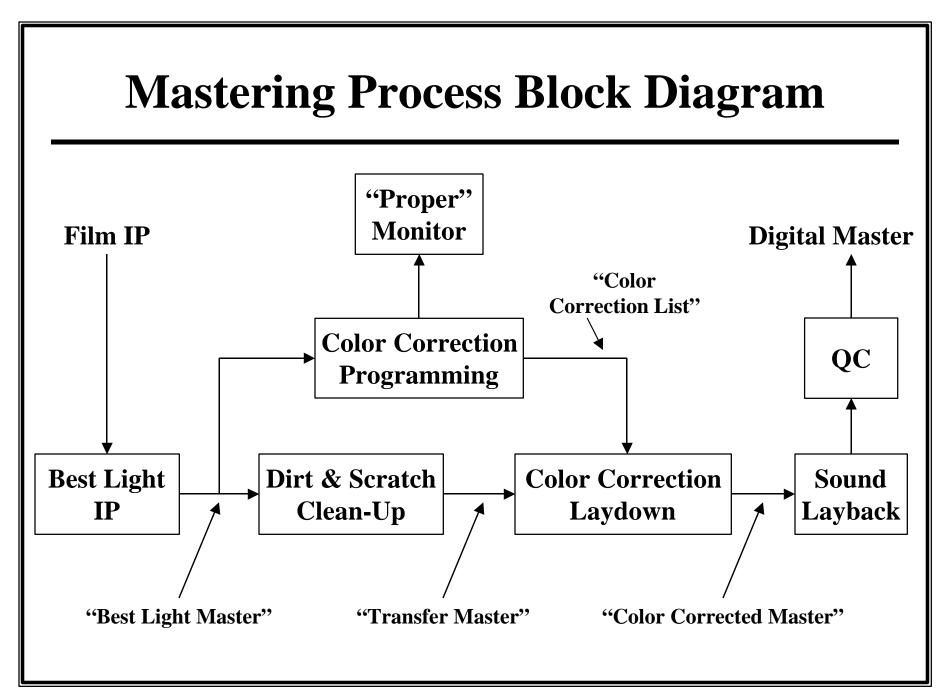
Mastering Process at Sony Pictures

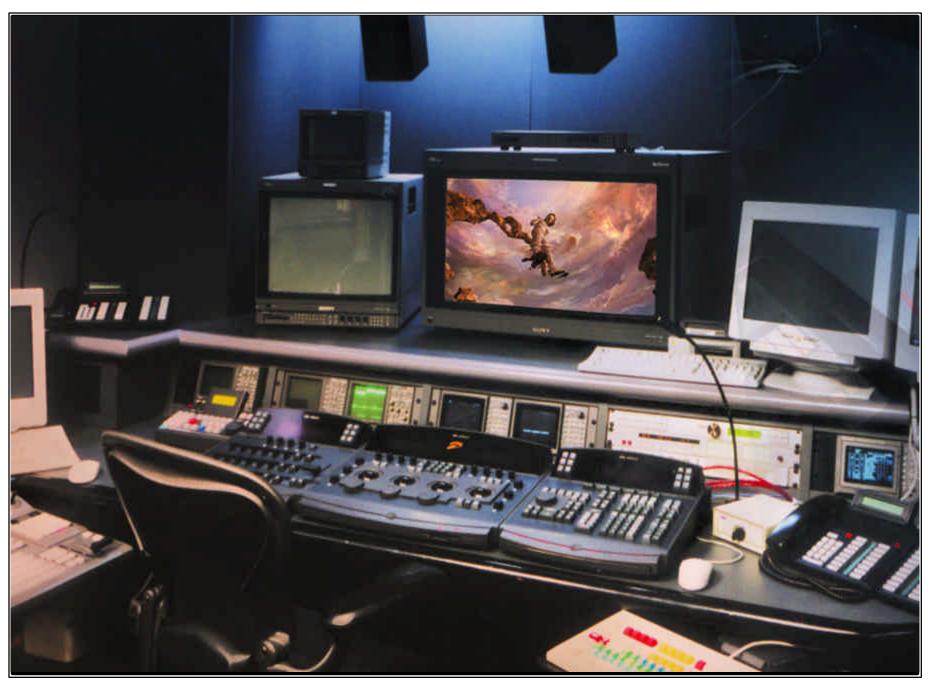
- Transfer IP with "best light" color correction and proper framing followed by simultaneous:
 - Program scene-to-scene color corrector using "Best Light Master" and "Proper Monitor" to produce "Color Correction List"
 - Dirt & scratch clean-up on "Best Light Master" by digital artist using Matador software to produce "Transfer Master"
- Run "Transfer Master" through color corrector using "Color Correction List" to produce "Color Corrected Master"

Mastering Process

Layback sound

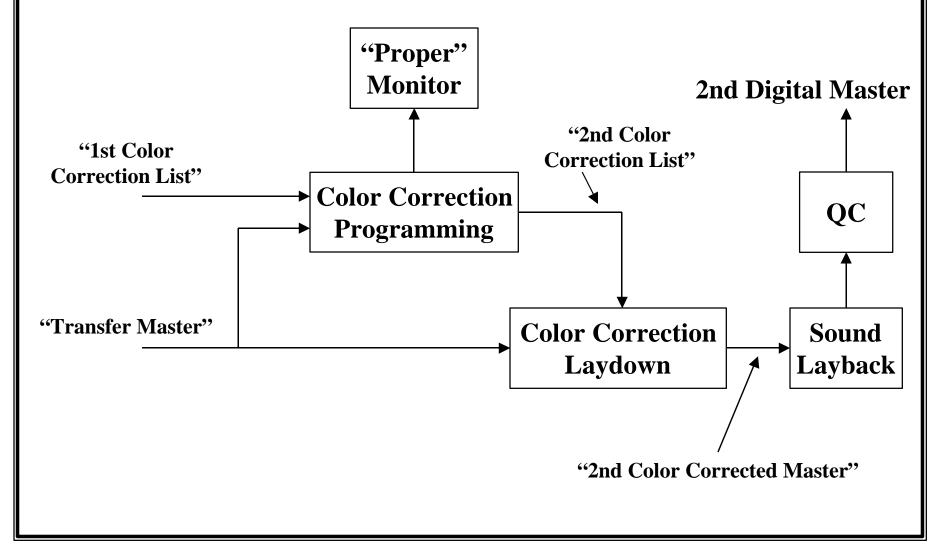
- 3/4" tape downconverted from "Best Light Master" given to Sony Pictures Sound Department
- Audio masters conformed to match video
- Audio layback after color correction completed
- QC
 - Full QC at HD for picture and sound
 - Fixes made if required
 - Second full QC at HD
- Downconversions





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Second Color Corrected Master





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Other Topics

- Primary topic being addressed is transfer of film
- Comments can apply to digital shooting where the digital camera output would be processed equivalent to the "Best Light Master"
- The "technology" of mastering has been described
- What about the "art" of mastering

The "Art" of Mastering

- Colorist works under guidance of the filmmaker (usually Director or Director of Photography)
- Goal usually is NOT to make the digital version look identical to the film version
- Better scene to scene matching is accomplished in digital realm than in film realm
- Colors can be changed to be what the filmmaker wants (secondary color correction)
- Faces of actors can be kept uniform throughout movie

More "Art" of Mastering

- Brightness or contrast can be changed to what the filmmaker wants
- Color, brightness, and contrast changes can be controlled differently in different areas of a frame (called "Windows")
- Color, brightness, and contrast changes can be varied during a scene
- The filmmaker can color a movie to be what is desired and see changes immediately
- Often production problems can be fixed

Standards

- It is critical that the audience see the movie the same way the filmmaker saw the movie when it was mastered:
 - Black levels
 - White levels
 - Gamma
 - Colorimetry
- The mastering "Proper Monitor" MUST be the same as the digital cinema projector/screen
- Different digital cinemas MUST be the same