



Scanning and Recording of Motion Picture Film

Conferența 3-8 August 1997
Exhibiții 5-7 August 1997



Los Angeles Convention Center
Los Angeles, California USA



Scanning and Recording of Motion Picture Film

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George Joblove
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Charles Poynton
Poynton Vector Corporation

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George Joblove
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John Brewer
Glenn Kennel
Eastman Kodak Co

John Carlson
Monaco Video

Bill Feightner
Efilm and Composite Image Systems

Thor Olson
Management Graphics Inc

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SCANNING AND RECORDING OF MOTION PICTURE FILM

Tuesday, August 5, 1997

Film scanning and recording technology enables computer graphics to reach mainstream cinema. This course presents the technology and the craft of scanning motion picture film into the digital film or digital video domain for processing and the recording digital images back out to motion picture film.

You will learn about the film medium, and the devices used to scan and record film. You will learn the theory and practice of tone and color reproduction in film. You will gain an understanding of how to characterize color reproduction in film and how to achieve day to day consistency.

8 30a–9 30a	1	Digital tone reproduction (Joblove)
9 30a–10 00a	2	Perception & visual acuity (Poynton)
10 00a–10 15a		—break—
10 15a–10 30a		Perception acuity and resolution (continued)
11 00a–12 00n	3	CRT film recording (Olson)
12 00n		—lunch—
1 30p–2 15p	4	Digital film scanning and laser film recording (Kennel)
2 15p–3 00p	5	Color calibration in digital film systems (Brewer)
3 00p–3 15p		—break—
3 15p–4 15p	6	Motion picture and video post production color (Carlson)
4 15p–5 00p		A practitioner's point of view (Feightner)

George Joblove
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PRESENTERS

George Joblove is the Director of Technology of Warner Digital Studios the visual effects unit of Warner Bros in Burbank California With a staff of 200 Warner Digital is one of the major producers of effects for feature motion pictures George's previous affiliations include nine years with Industrial Light & Magic where he was a founder and manager of its Computer Graphics Department which pioneered digital manipulation of live action motion picture film at theatrical resolution for visual effects He received a Scientific and Engineering Academy Award for his contributions to this work He has been directly involved in digital imaging on motion picture film in the entertainment industry since 1981

Charles Poynton works to integrate video technology – particularly high definition television and accurate color reproduction – into computer work stations While at Sun Microsystems from 1988 to 1995 he initiated Sun's HDTV research project and introduced color management technology to Sun His book *A Technical Introduction to Digital Video* was recently published by John Wiley & Sons

Thor Olson is a researcher at Management Graphics Inc manufacturer of the Solitaire line of digital film recorders He has been involved in the design and evolution of film recording technology for a decade and holds the title *Color Scientist* He holds several patents in this field and has developed algorithms for the precise alignment and calibration of these high resolution systems He is currently researching digital tonal scales colorimetry and exposure response especially in color negative film types

Glenn Kennel works in the Professional Motion Imaging division of Eastman Kodak Co Despite his current title Product Manager Glenn is a principal architect of Kodak's Cinéon film scanner and recorder products

John Brewer is a Research Scientist with the Imaging Research & Development department of Eastman Kodak He is responsible for the color processing science and algorithms in Kodak's Cinéon scanner and recorder products

John A. Carlson is Vice President and Chief Colorist at Monaco Video He has eight years of experience as a film timer and twelve years as a film to tape colorist He was the color timer for Pixar's *Toy Story* He is a Fellow of the SMPTE and teaches post production for the San Francisco State & Academy of Art

William C. Feightner is director of research and development and technical director for Efilm and Composite Image Systems In both companies day to day business he is constantly involved in maintaining unity input/output through numerous color metrics used by various clients William has been involved in electronic imaging for most of his career He has been a special effects consultant on numerous film and television projects with color screen being one of his specialties William has given various effects seminars both domestically and internationally William has received an Emmy award and a Monitor award for his work

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Appendices

- A Behind gamma's disguise (Olson)**
- B Tonal scales and Solitaire Cine-3 lookup tables (Olson)**
- C Color film exposure in CRT image recorders (Olson)**