

SYNTHESIS

David Reisner Curriculum Vitae – Chronological + Topic

Motion Picture Industry

2001 - Present **D-Cinema Consulting**
Owner/Consultant. Digital Cinema, Image Quality, Color, Workflow, Hybrid Imaging. Techniques, Technologies, and Best Practices for Cinema Production/Post/Exhibition, Image Quality, Color, Workflow, Hybrid Imaging. Work for clients. Volunteer work for key industry groups. Industry education.

Motion Picture Industry - Awards

2/2014 Academy Award – Technical Achievement Award
Co-creation of the ASC CDL (American Society of Cinematographers Color Decision List). The ASC CDL is used in the production and post of 90% of feature motion pictures and 70% of scripted series television worldwide.

9/2014 Hollywood Post Alliance Judges Award for Creativity and Engineering
Co-creation of the ASC CDL.

2/2012 Primetime Emmy Engineering Award
Acknowledged ASC participant in co-creation of the ASC CDL.

Motion Picture Industry – Memberships/Acknowledgements

Secretary, American Society of Cinematographers (ASC) Technology Committee, and DI, Camera, and Advanced Imaging subcommittees (2001–present)

Associate Member, ASC (2013–present)

Active Member, Visual Effects Society (VES) (2012–present)

Chair, Academy of Motion Picture Arts and Sciences, Scientific and Technical Awards Committee – Monitors Committee (2014-2015)

Member, Society of Motion Picture and Television Engineers (SMPTE) (2000-present)

Vice-chair, SMPTE DC28.10, 21DC10, and KMAH Digital Cinema Working Groups (2003-2013)

Vice-chair, Inter-Society Digital Cinema Forum (ISDCF) (2008-2013)

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Motion Picture Industry – Business

- 2006 Digital Cinema Roll-out Financing
Worked with one of the major international banks to arrange \$3.5B financing for the worldwide digital cinema rollout. Had the deal made on the bank side, but couldn't get the studios. (ING, Media & Telecom)
- 2001 VPF (Virtual Print Fee) Model for Digital Cinema Roll-out
As part of his application for Newco/DCI positions, made one of the first proposals for a VPF-finance model for conversion and roll-out of digital cinema for motion picture distribution and exhibition. Very involved in setting and evaluating the quality requirements for digital cinema, and in the first serious technical work (including Proof-of-Concept designs for DCI) leading to the modern systems. (Newco/DCI)
- 2001 Invited applicant for Newco/DCI CEO and CTO positions
Not selected.

Motion Picture Industry - Leadership

- 8/2014 – 2/2015 2015 Academy Awards, committee chair
Chair of one of the technical committees for the Academy of Motion Picture Arts and Sciences - Scientific and Technical Awards Committee. Recommended several Awards for at the 2015 Academy Awards. (This position is normally held by a team of two experienced Academy members.) (AMPAS)
- 2001 (founding) – present ASC Technology Committee, Secretary
Secretary (effectively vice-chair). The first time in the American Society of Cinematographer's 85-year history that a non-Member has served on an ASC committee. Helped conceive and create the Technology Committee. A principle planner, designer, participant in most significant ASC Technology Committee activities. Secretary of Digital Intermediate, Workflow, Advanced Imaging, Camera, Camera Assessment subcommittees. Vice-chair of 3D.
The ASC Technology Committee has provided the industry's key technical and creative guidance through the creation, introduction, and transition to digital technologies in motion picture production, post, and exhibition. (ASC)
- 2001 - 2010 United States delegation to the ITU, Member
Member of the US delegation to the International Telecommunications Union – Radiocommunication Sector – Large Screen Digital Imagery (ITU-R TG6/9).
Member of key group developing and implementing strategy to achieve a Hollywood-level, audience satisfying presentation.
Assistant-hosted FCC and State Department Hollywood orientation visit.

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Working on behalf of the ASC International Committee, educated cinematography societies worldwide on the coming digital cinema transition and how that system was being determined, defined. Organized creative community input to ITU-R TG6/9 to prevent HDTV (1920x1080, 8-bit) from becoming the legally-required system for digital system. This was the first (and probably only) time a non-ASC Member has represented the ASC in this type of capacity. (United States of America – ITU)

2007 – 2009 ISDCF (InterSociety Digital Cinema Forum), Secretary and Vice-Chair Group of equipment manufacturers, studios, mastering, distribution, exhibitors coordinating a smooth roll-out of digital cinema. (Major Studio)

2002-2003 Industry "Blue-Ribbon" Group on Digital Cinema Test Materials
Convened a top-level group of industry executives to create feature-quality test materials to determine requirements for the new digital cinema system. Included ASC President and "name" cinematographers, DCI CTO and Director of Technology, Kodak experts and execs, key SMPTE digital cinema participants, studio representatives. (Obviated by ASC-DCI StEM.)

2001 - 2003 ASC International Committee, Advisor
Educated the ASC and cinematography societies worldwide on the digital cinema transition, technology, standards and organized resistance to proposed HDTV-for-cinema in international standards (ITU). Included phone, e-mail, overseas presentations, document authorship. (ASC)

Digital Cinema – Quality

2002 – 2005 Coordination with DCI
Regular coordination with DCI on digital cinema requirements, with a particular emphasis on image quality and in-theater testing. Architect of proposed 2K and 4K Proof-of-Concept play-out systems. Considered for CEO and CTO positions.

2003 ASC-DCI Standard Evaluation Material (StEM). Screen credits: Test Design and Methodology; Scenario (story)
Designed and created the Industry-reference, feature-quality, widely available test movie used as the official reference to develop and validate requirements for digital cinema projection, distribution, and mastering generally comparable to 35mm. One of the primary motivators, designers, coordinators, and producers. On-set line production. Scouting photos.

2002 - 2003 SMPTE DC28 Digital Cinema Test Materials ad hoc group, Co-Chair

Digital Cinema - Standards

11/2011 – 12/2011 Red Chalk

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Patent review.

- 2009 – 2010 UHDTV Definition – BT-2020 – Rec. 2020
Industry-reference characterization of the last generation of Sony BVM CRT monitors and also rooms, actually used in post. Used in designing the US's proposed EOTF (Electro-Optical Transfer Function) for BT-2020 UHDTV. Designed and conducted extensive technical measurement sessions at many of the key/major post facilities in Los Angeles. (Dolby)
- 2002 - 2012 SMPTE DC28 and 21DC Digital Cinema Standards groups, officer Vice-Chair, Secretary, Co-Chair of working groups and ad hoc groups including Projection, Mastering, Security (KMAH) during the period when those groups did their key work defining and standardizing digital cinema. Active participant in most SMPTE digital cinema groups (compression, theater systems, exhibition, audio, etc.).

Motion Imaging – Production and Post

- 2003 – Present ASC Color Decision List (ASC CDL), co-author
The ASC CDL, designed by the DI subcommittee of the ASC Technology Committee with a wide group of industry participants, allows passing basic, primary look and color corrections from set to dailies to post and between different facilities, equipment, and software from different manufacturers. One of the principal designers and co-author of the system, specifications, and release.
The ASC CDL is used in the workflow of 90% of features, 70% of scripted series television, and 99% of visual effects turn over.
2014 Academy Technical Achievement Award for role in design of ASC CDL.
Contributor to 2012 Primetime Emmy Engineering Award to ASC CDL.
- 2009 – 2014 Academy Color Encoding System (ACES)
The ASC CDL is the primary/reference Look Management Transform in ACES (was Academy Image Interchange Framework (IIF)) wide-gamut, high dynamic range color encoding. The LMT is the primary place in ACES where artistic intent and look can be encoded. The ASC CDL is the primary portable mechanism used in current workflows.
One of primary people providing technical reference on ASC CDL during ACES development, making sure systems were defined compatibly. One of primary designers of the ACES log and ACESproxy formats required for interoperation during transition to a full industry of equipment that is fully ACES-capable. On-set testing and qualification during development and tuning.
- 2009 – 2010 Dolby PRM Monitor
Small participation in design of the Dolby PRM-4200 monitor. Input on Electro-Optical Transfer Function and lighting-engine circuit design.

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2006 – 2010 ASC-PGA Camera Assessment Series (CAS)

Library of footage from seven digital cinema and one 35mm film cameras in several scenes demanding a range of motion picture imaging behaviours. Resource to aid selecting right camera for a show. 200+ person shoot at Universal.

One of the key motivators, designers, participants in this effort. On-set leadership team. Scouting photos.

Screen credit: Committee Secretary.

2010 - 2011 Academy – IIF (Image Interchange Framework)

Assisted the Academy Sci-Tech Council in increasing education and awareness of the IIF/ACES project and encoding.

Post-oriented technical documentation. Proposed more general level educational approaches and documents. (AMPAS Sci-Tech Council)

2008 Post Production Workflow

Assisted a mid-sized post facility in analyzing persistent workflow problem. (NDA)

Digital Cinema – Distribution and Exhibition

5/2011 – 7/2011 CineCert

2009 ISDCF 3D Luminance Demo

Co-principal organizer, test designer. Demonstration for 500 industry members of practical, in-theater effects of mastering and exhibiting 3D at a range of luminances. This was the first and only time that most people in the industry have been able to compare and evaluate 3D mastering practices and the cost vs. quality trade-off of what is being installed in theaters. (ISDCF)

1/2009 – 3/2009 CineCert

2007 – 2008 DTS Security Policies

1/2006 – 5/2006 THX

3/2003 – 9/2003 DigiFlicks

Publications / Speaking / Teaching

2006-2014 "American Society of Cinematographers (ASC) Technology Committee Progress Report", SMPTE Motion Imaging Journal, annual article, co-author

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2006-2014 "American Society of Cinematographers (ASC) Technology Committee Progress Report – Secretary's Comment", SMPTE Motion Imaging Journal, article, section author. Author of most special reports/topics.

2014, Oct Interviewed on Home Theater Geeks webcast. 1 hour, more than 28,000 viewers

2014, May Interviewed on Home Theater Geeks webcast. 1 hour, more than 27,000 viewers

2014 "Digital Cinematography", Visual Effects Society Handbook 2nd ed., chapter, primary author of major revision tracking the accelerated pace of change in production

2010 "ASC Color Decision List (ASC CDL)", American Cinematographer Manual, 10th edition, chapter, lead author

2010 "Digital Cinematography", Visual Effects Society Handbook 1st ed., chapter, co-author

2010 Interviewed on Home Theater Geeks webcast. 1 hour, more than 25,000 viewers

2008 "Digital Cinema", SMPTE Professional Development Academy, instructor, 1 ½ hour seminar via web. SMPTE created the definitions and standards for digital cinema. Selected by SMPTE to author and present their first class on digital cinema.

2008 "ISDCF Report", NAB Digital Cinema Summit, speaker. 1200 paid attendees

2006 "ASC and DCI – initiative for the digital future", IMAGO (European Federation of Cinematography Societies) Digital Cinema Conference, Oslo, Norway, invited keynote

2006 "Demo and Guided Tour of the ASC-DCI Standard Evaluation Material (StEM)", IMAGO Digital Cinema Conference, Oslo, Norway, invited keynote

2006 "Digital Cinema in the United States", IMAGO Digital Cinema Conference, Oslo, Norway, invited keynote

2006 "A Quick Overview of DI", Art Directors Guild Perspective on Technology, chapter, author

2006 "Digital Intermediate", Art Directors Guild Art Direction Wiki, web publication, author

2002 "American Society of Cinematographers Statement on Digital Cinema Standards", ITU-R TG6/9 (International Telecommunications Union – Radiocommunication Sector – Large Screen Digital Imagery), co-author of ASC position statement. Significant contribution to several other nation's cinematography societies' position statements.

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Articles Quoting

"Scientific and Technical Academy Awards: Oscar Bids Bittersweet Farewell to Film", David Cohen, Variety, 2/15/2014

"DCI announces digital, 3-D specs", David Cohen, Variety, 4/15/2007

"Tomorrow's Technology", Douglas Bankston, American Cinematographer, 12/2006

"ASC Tech Committee Report", Carolyn Giardina, Shoot, 10/20/2006

"Expectativas em torno da implantação do cinema digital", Carlos Ebert, curta o curta and associação brasileira de cinematografia, 9/7/2003

Articles About/Citing/Referencing

"Five SMPTE Members Receive Academy Awards for Scientific and Technical Achievement", Frank Beacham, TVNewsCheck, 3/4/2014

"Post Focus: ASC CDL", Benjamin B, American Cinematographer, 10/2008

"Digital Cinema Summit Covers the Full Range", Mary Ann Melody, ProAudio Review, 2/26/2008

"Software color code has ASC in pink", Carolyn Giardina, Hollywood Reporter, 6/22/2007

"Post to SMPTE: Open Up the DCI Spec. Modern VideoFilm Exec Urges More Flexibility", Bryant Frazer, Film & Video, 4/15/2007

"Tomorrow's Technology", Douglas Bankston, American Cinematographer, 12/2006

"Oslo Digital Cinema Conference - Workshop", Jean-Jacques Bouhon, Lettre de l'AFC, 7 and 8/2006

"The Color-Space Conundrum, Part Two: Digital Workflow", Douglas Bankston, American Cinematographer, 5/2005

"ASC gets into digital", Dave McNary, Daily Variety, 5/27/2003

Entertainment Management

Record deal – Island Records

Record deal – Warner

Top-tier CDROM deal – Criterion

Six-figure US and European Book Deals - HarperCollins/Avon Books, and Bertelsmann

Concert producer - US

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Concert co-producer - US, Europe, and Japan
Speaking engagements - US, Europe, and Japan

Technology and Business Consulting

Synthesis - Design and Research is a Southern California-based company developing industry-specific software products and providing a broad range of consulting services to the U.S. and International markets. Synthesis specializes in solving unusual and multi-disciplinary problems in all fields of human endeavor. We have extensive experience in computer systems, environments, and applications, digital audio and signal processing, and the use of technology in the Arts and Sciences, as well as creative and production work in most areas of the entertainment industry. With more than 15 years of experience in a broad variety of domains, our list of current and past clients includes...

David Reisner Consulting provides the personal services of Synthesis' founder to assist entertainment, investment, and other executives in making intelligent decisions when their areas of endeavor touch on technology. DRC can provide the level and type of understanding necessary to make good judgments, in a manner sensitive to the client's backgrounds and time constraints.

Technology – Memberships

Association for Computing Machinery (1978-2008)
Institute for Electrical and Electronic Engineers, IEEE Computer Society (1979-2006)
Audio Engineering Society (1980-2006)
USENIX (Unix technical society) (1981-2006)

Special Projects

Internet Movie and Music Service

Before iTunes existed, did business evaluation, Mergers & Acquisitions, industry relations/licensing, and system architecture for potential launch of an internet-based movie and music service. Creative Labs

Killer Whale Training

Developed SWACS, the Sea World Audio Cueing System, to train killer whales for shows at the Sea World marine parks. SWACS uses computer-generated sound projected underwater in a synthetic pseudo-language. Sea World

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Sound Noise and Vibration

Technical lead for development of SDRC Sound Quality – a sound, noise, and vibration system that was used at 1/3 of the world's major auto manufacturers and many other industrial and consumer products companies. SDRC

Biological Fingerprinting

Designed, developed, tested matching algorithm for a biological fingerprinting system based on the autoimmune antibody antigen profile. The system was used by the US military during Desert Storm, but for law enforcement and general use was obviated by DNA-based techniques using polymerase chain reaction (PCR) replication. Miragen. 1994

Consumer Electronics and Services

First Popular Hand-held Video Jukebox

Initial approach, engineering evaluation, and design. Creative NOMAD

Computer – Hardware and Systems

First Moderately-Priced, Professional Digital Audio Workstation

Software architect, hardware advisor. Hybrid Arts ADAP-II

Workstation-based Video Conferencing

Sun Microsystems Laboratories

First Handheld Programmable Portable Computer

Software designer, hardware advisor. This ruggedized portable computer used the first 2 line x 16 character LCD display ever brought into the US. Azurdata

Early VLIW (Very Long Instruction Word) Processor Architecture and Multi-transaction Asynchronous Buss

Early digital synthesizer. Architecture. MSI and nMOS design. This was one of the first two, possibly the first, Very Long Instruction Word processor architecture – now used universally in high performance GPUs. (Independent study at UCSD_

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Computer – Software

Data and Audio Storage

Seagate DDS-3

Data and Audio Storage

Sony DDS-3

Storage Subsystem

SGI Indigo-2

DirectDAT

Synthesis

Highly Portable Source-level Debugger for Ada

TeleSoft

68000 Debugger

Wrote boot ROM, debugger, and chip-layout aware memory tester for early 68000 development board.

UCSD Pascal Project

12th member of the UCSD Pascal Project. Responsible for LSI-11 and PDP-11 interpreters after 1.3. Wrote native code generator for TI990. Wrote first Motorola 68000 disassembler (before chip was released).

James Gosling has written that the Java bytecode virtual machine was based on UCSD Pascal's p-code.

Audio

Sony Oxford Console

Responsible for software that allowed Oxford console automations to be saved and shared. Also allowed 3rd party editing applications.

Digital Signal Processor

Quintprocessor. Ariel and NeXT

Audiophile Audio

Trained an audiophile manufacturer on successfully designing systems with digital and low-level audio circuitry in the same box, for their first CD player. Counterpoint

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Dubbing Stage Automation

In 1981, designed a system to computer-control all major recording and mixing function in Universal's main dubbing stage. Volition Systems

Publications

"Further Uses of 'Scenario'", Association of Computing Machinery - Special Interest Group on Computer Human Interaction (ACM SIGCHI) Bulletin, 1992

"Summary of Current Research, Position Paper", Proceedings Addenda, ICAD '94 - Second International Conference on Auditory Display, Santa Fe Institute, 1994

"Recreating Reality, Redefining Art", Panel Presentation, Proceedings of the EXTRO-2 (Extropians') Conference, 1995

"Seybold Digital World Conference - Report and Commentary", European Multimedia Bulletin, London, 1991

Technology Consulting Clients

- *Silicon Graphics*
- *Sun Microsystems Laboratories*
- *Time-Warner Interactive / Atari Games*
- *HBO*
- *Structural Dynamics Research Corp.*
- *Harcourt-Brace-Javonovitch / Sea World Marine Parks*
- *Abekas*
- *LBE*
- *Ariel*
- *White Data Systems*
- *TeleSoft*
- *Miragen*
- *Azurdata*
- *Hybrid Arts*
- *Volition Systems*
- *Renascence Systems Inc.*

And projects with...

- *NeXT Computer*
- *Teac*
- *Sony*
- *Island Records*
- *Avon Books*
- *The Voyager Company*

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- *Fuji TV*
- *European Multimedia Bulletin*

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Miscellaneous

2000 - 2010 Photographer

Assorted still photography, including US & overseas major publisher book jackets, US and international magazine covers, a celebrity spread for Italian Vogue, Omni Germany, and a piece for QVC catalogue that ran 14M copies.

Rolling Stones "Bridges to Babylon" CD - Engineered non-Stones intro for track that was cut from final album

Lyricist, songwriter for several pop songs recorded by name artists and producers (Thomas Dolby, Jeffrey Smith and Peter Lord)

Comedy writer – wrote short pieces used by Dennis Miller, Sinbad (Miller is known to never use material from writers; Sinbad rarely uses material from writers)

Thanked (with John Bloome) in 'The Possibility of Pragmatic Reasons for Belief and the Wrong Kind of Reason Problem'. Dr. Andrew Reisner, *Philosophical Studies*, 145, 2, 2009, pp.257-272.

Early personal computer repair – Lead technician and electronics expert for one of the earlier personal computer stores. Included repair work on an Apple I computer. (1976)

VHF radio equipment repair – HF and VHF radio repair, antenna design, equipment installation, primary responsibility for maintaining inventory and stocking two departments. (1974)

Microdissection and Chromatography - Lab and research assistant - microdissection of tissue samples (extracting sebaceous glands from hair follicles), preparing media and assisting with thin-layer chromatographic analysis. UCLA School of Medicine. 1972, Summer

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Space Enthusiast

2014, May International Space Development Conference, invited speaker – “Extended Human Perception in Manned Space Exploration”. Panelist – “Guide to Getting Into Space”. Transhumanism Track.

Space Dermatology Foundation (1990-1995)

Only non-MD associate member of the Space Dermatology Foundation, participated in space medicine meetings at Kennedy, Johnson, and Ames. Topics included fluid pressure and transport, healing, monitoring bone length changes with extended weightlessness.

Spent the night of my 38th birthday with a couple of astronomers on the 12-inch Zeiss at Griffith Observatory, watching Shoemaker-Levy 9 punch holes in Jupiter.

As the house-guest of Sam Beddingfield, ex-Deputy Director of Shuttle Operations (Kennedy Space Center employee #4), attended both the launch and landing of STS-34 – the Atlantis mission that launched Galileo. Have also attended two additional shuttle landings.

One of a small number of guests invited to the launch of the SETI HRMS (High Resolution Microwave Survey) at Goldstone.

Guest at JPL for two Mars mission landings and first transmissions.