

# 2018 NAB Show's

## Future of Cinema Conference, Produced in Partnership With SMPTE

SMPTE's program explored the future of movie making

By Aimée Ricca

**I**n the 21st century, cinema is no longer confined to a theatrical setting. With consumers seeking content via multiple distribution outlets, creators are working hard to maintain artistic intent in an ever-evolving landscape. However, should that be the highest priority? The Future of Cinema Conference program explored this and other thought-provoking questions.

On 7–8 April, during the 2018 NAB Show, the conference addressed forward-looking techniques and challenges related to making content for theatrical release and beyond, with an emphasis on technology. Sessions included the next generation of cinema, creative use of high dynamic



SMPTE President Matthew Goldman, Ericsson.

range (HDR), immersive image capture, location-based entertainment (LBE), workspace inclusion, the viewing habits of Generation Z, artificial intelligence (AI), and machine learning (ML).

### Next-Generation Cinema

After brief introductions from SMPTE President Matthew Goldman, Executive Vice President Patrick Griffis, and Conference Program Chair Chris Witham, the FoCC kicked off with a session on the topic of next-generation cinema.



SMPTE Executive Vice President Patrick Griffis, Dolby.

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Program Chair Chris Witham, Walt Disney Studios.

Michael Zink hosted the session titled “Getting Ready for Next-Generation Cinema.” Panelists included Ronan Boitard of Barco/MTT Innovation, Gary Feather of NanoLumens, and Jon Karafin of Light Field Lab, who discussed that, after many decades of cinema projectors evolving, we now find ourselves at a point of potential disruption. Projectors have evolved from carbon arc illumination through nitrate film to xenon arc lamps through acetate to digital projectors with laser illumination. The session also examined the possibilities for the next generation of movie theaters, which the panel said may include direct-view displays or even holographic-like imaging from light field displays.

### High Dynamic Range

The HDR session, hosted by Jaclyn Pytlarz, took a deep dive into the



Photo credit: Robb Cohen Photography, courtesy of NAB

Jaclyn Pytlarz, Dolby.

future of HDR, tackling it from both the production and scientific point of view. Speakers were Alexandre Chapiro of Dolby Laboratories, Tyler Pruitt of Portrait Displays, Inc., and Bill Baggelaar of Sony Pictures Entertainment. The panel explored how filmmaking changes with HDR from workflows to content and even the viewer perception.

### Immersive Images

Technology has advanced far beyond stereoscopic 3D. Motion images can now include detailed volumetric representations of the real world, with interaction from real characters. This session, featuring speakers Pete Ludé and Jon Karafin along with Ryan Damm



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Tyler Pruitt, Portrait Displays.

of Visby Cameras, provided an overview of the range of contemporary image-capture techniques, such as 360° cameras, photogrammetry, free viewpoint video, and light field cinematography, as well as recent work in creating standards for image interchange. The discussion included the challenges and tradeoffs in capturing volumetric images with “six degrees of freedom,” and the various approaches of encoding these either as photons—such as in traditional filmmaking—or as a computer model to be reconstructed on the viewer’s device.

### Location-Based Entertainment

With the emergence of virtual reality (VR) and haptics, there is a movement to bring VR-based entertainment

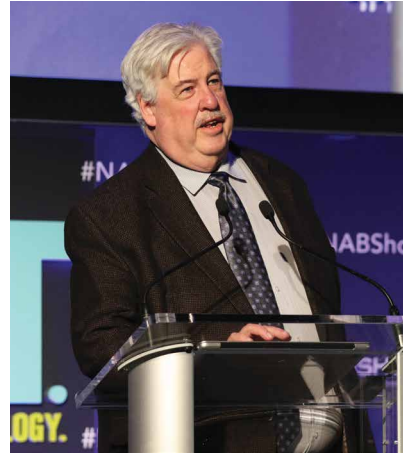


Photo credit: Robb Cohen Photography, courtesy of NAB

Pete Ludé, Mission Rock Digital.

experiences to young audiences in urban environments. Experimental sites have ranged from highly interactive gaming to immersive storytelling to environmental experiences—blurring the line between physical and digital realities. Brooks Brown of Starbreeze Studios, Alexis Macklin of Greenlight Insights, and Nancy Bennett of Two-Bit Circus discussed their successes and challenges in launching these new LBE experiences.

### Inclusion in the Cinema Workspace

Britta Wilson, vice president inclusion strategist at Pixar Animation Studios, made a presentation on diversity and inclusion in the cinema workspace. Explaining the difference between diversity and inclusion, Wilson said, “diversity is about counting heads, while inclusion is about making heads count.” She spoke about thoughtful hiring practices that can help create more diverse workspace environments and how to be more aware of subconscious biases that may lead



Photo credit: Robb Cohen Photography, courtesy of NAB

Britta Wilson, Pixar Animation Studios.

to a less than hospitable climate for some. Wilson explored the steps that are being taken to combat exclusivity in cinema and to cultivate environments of inclusion that allow everyone to thrive.

### Keynote: Christopher Buchanan of Samsung Electronics America

Cinema can mean many things. It can mean a film. It can mean a theater, the filmmaking process, or simply, as we know it in the industry, the business. “I like thinking about cinema’s future, but the first thing that comes to mind, what is the future? Is there a future? Are cinema’s days numbered?” began Chris Buchanan. Buchanan has vast experience not only with Samsung but also held positions at Sony, Amazon, Fox, and Warner Bros. He has experience in the world of cinema. Buchanan said that he

to mention the fact that consumers are buying larger and larger TVs. And with micro-LED, and 8K displays just around the corner, home theater is pretty tough to beat,” said Buchanan. A third trend is the shortening of the theatrical window. “They (the studios) want to fight piracy, and they want to capitalize on the huge spends they make on the theatrical release. I completely get it. I come from that world, but that’s not making exhibitors feel good, and it’s not making filmmakers feel good.”

Buchanan explained that consumers crave an experience, particularly younger consumers: “I have two Gen Z boys and, getting them to go to the movies—it has to be a big movie, on the big screen—with whatever bells and whistles we can provide. Otherwise, they’re going to watch it on their phone.” Additionally, Buchanan discussed social currency, “Facebook and Instagram likes are now the social currency for millions of Americans, especially millennials and the quest for likes requires a constant stream of new, shareable content. Experiences are a much better source of currency than purchases.” Finally, Buchanan talked about fear of missing out (FOMO) as a driver that sends consumers to the cinema. He asked the audience, “how many of you saw *Black Panther* in the theater because you wanted to be part of the conversation?” Many attendees raised their hands.

According to Buchanan, FOMO drives revenue streams for live entertainment, such as music festivals and Broadway plays. “The kids are saying, ‘Hey, I got to see *Hamilton* while it’s still a play. I’ve got to go to Coachella because it doesn’t even matter who’s playing—I just want to be there and be part of that.’” He feels

that this represents a real opportunity for the future of cinema and that it will go in two different directions: event cinema and social cinema.

“Event cinema embraces everything Hollywood’s about. Epic storytelling, spectacle, the latest in technology. The visceral experiences that come from sitting in a room and feeling your chest vibrate from the explosion. Current event-like experiences obviously include experiences such as IMAX and 4DX with ScreenX,” said Buchanan. He also discussed LED cinema walls, with HDR, HFR, and WCG, as well as preshow and post-show interactivity for the audience, such as digital movie posters, gamified on-screen advertising, and companion VR experiences.

“Social cinema kind of elevates the living room experience away from home with the latest in exhibition technology, a very high level of service and luxury and personalization. Imagine Mr. and Mrs. George Clooney’s screening room,” describes Buchanan. “Ten or 15 of your friends can come in and sit in the most comfortable and luxurious seats. You have a bar complete with a bartender and an ever-changing menu. Only the best in terms of the audio system and the latest LED cinema display, the million-dollar screening room.” He predicts that small theaters, small auditoriums, casual seating, on-call food and beverage service, and ambient lighting will be trending in the future.



Barbara Lange, Chris Buchanan, and Patrick Griffis.

Photo credit: Robb Cohen Photography, courtesy of NAB



Photo credit: Robb Cohen Photography, courtesy of NAB

Keynote Speaker Chris Buchanan, Samsung.

believes that the magic of cinema is the experience, and not just the content. He discussed trends that he feels are impacting the cinema business. The first is what he referred to as the “Netflix revolution”—streaming video on demand. Next, he cited television picture quality. “Consumer television technology surpasses typical presentation on many fronts, including resolution, dynamic range, and contrast, not



Photo credit: Robb Cohen Photography, courtesy of NAB.

Phillip Lelyveld, Entertainment Technology Center.



Photo credit: Robb Cohen Photography, courtesy of NAB.

Gen Z presenter Helen Ludé.

Buchanan concluded his keynote by saying, "I just think we're at a new beginning. And, as an industry, we all need to work together to drive this evolution forward."

### Gen Z: The YouTube Generation

In 2014, Americans between the ages of 12 and 24 saw 32% fewer films in theaters than they did just six years prior. Per a Motion Picture Association of America report, the number of frequent moviegoers between the ages of 18 and 24 dropped by 17%. Gen Z spends an average of 15.4 hr/week on their smartphones and only 13.2 hr watching TV, the lowest of any preceding generation. Phillip Lelyveld of the Entertainment Technology Center at USC introduced high school student Helen Ludé, who presented the results of a survey that she conducted on postmillennial media and cinema consumption habits. Ludé's survey

found that most respondents said the reason they go to the cinema is for the movie itself and that the top reason to choose one theater over another is screen size.

### Do Androids Dream of Making Movies?

The media and entertainment industry has been buzzing with use of AI and ML. This session was moderated by Annie Chang of Universal Studios with panelists Yves Bergquist of the Entertainment Technology Center at USC and David Kulczar of IBM Watson Media. Together, they discussed how the industry is currently advancing in AI and ML content creation and where these technologies could take us in the future of making movies and cinema.

Special thanks to the program committee, which was comprised

Zink, vice president of technology at Warner Bros.

### SMPTE Members Honored at the 2018 NAB Show

Also during the 2018 NAB Show, SMPTE members were among those honored for their contributions to the motion imaging field. SMPTE Fellows Robert Ross, senior vice president for East Coast operations at CBS Engineering, and Richard Friedel, executive vice president at Fox Engineering, received Lifetime Achievement Awards from the National Academy of Television Arts and Sciences at the 69th Annual Technology and Engineering Emmy Awards.

SMPTE Executive Director Barbara Lange, along with SMPTE Fellow Michelle Munson, CEO and co-founder of Eluvio; and members Megan McGough Christian,



Photo credit: Robb Cohen Photography, courtesy of NAB.

FoCC audience.

of Program Chair Chris Witham, director of emerging technology at Walt Disney Studios; along with SMPTE Fellows Annie Chang, vice president of creative technologies at Universal Studios; and Pete Ludé, CTO of Mission Rock Digital; as well as Jaclyn Pytlarz, applied vision science engineer at Dolby Laboratories; Cynthia Slavens, director of post-production at Pixar Animation Studios; and Michael

production manager at FRONTLINE/WGBH Boston; Katie Hinsien, founder of Blue Collar Post Collective and vice president of operations at the Department of Post; Philip Hodgetts, president and co-founder of Lumberjack Systems; Jesse Korosi, director of workflow at Sim; and Kylie Peña, president of Blue Collar Post Collective and coordinator of production technologies at Netflix, were named StudioDaily50 honorees,

which recognizes influential creatives and technologists whose leadership breaks new ground in media and entertainment.

SMPTE Member and Education Director Jaclyn Pytlarz, senior engineer for applied vision science at Dolby Laboratories, was honored with the Women in Technology Women to Watch Award from *TVNewsCheck*.



Photo credit: Robb Cohen Photography, courtesy of NAB.

Barbara Lange.

### IP Showcase

SMPTE, a founding member of the Joint Task Force for Networked Media, along with Advance Media Workflow Association, European Broadcast, and Video Services Forum, teamed up with the Audio Engineering Society, Alliance for IP Media Solutions, IABM, Media Networking Alliance, and NAB to develop the IP Showcase at the 2017 NAB Show. The IP Showcase offered a holistic view of industry alignment, action, and transformation with respect to production, contribution, and primary distribution workflows using IP. The pavilion assisted professionals, including broadcast/IT engineers, chief executive officers, and producers, to determine how they can leverage benefits of the recently published SMPTE ST 2110 standards.

### Student Event

Students from all over the world attended an ice cream social. The event, hosted by SMPTE, provided an opportunity for students



Photo credit: Robb Cohen Photography, courtesy of NAB.

(L-R) Moderator Annie Chang with panelists Yves Bergquist and David Kulczar.



Photo credit: Robb Cohen Photography, courtesy of NAB.



Photo credit: Robb Cohen Photography, courtesy of NAB.

IP Showcase.

to interact with SMPTE members and leadership, learning about their work in various sectors of the industry, including audio, digital

cinema, cameras, broadcasting, post-production, and manufacturing. One World Computing supported the event.

