66th Annual
TECHNOLOGY &
ENGINEERING
EMMY® AWARDS

JANUARY 8, 2015
A Message from the Chair, Charles Dages

On behalf of The National Academy of Television Arts & Sciences, I am delighted to welcome you to the 66th Annual Technology & Engineering Emmy Awards. Tonight we will be honoring and celebrating those innovative organizations, companies, and individuals that have excelled in creating technologies of excellence.

Technology & Engineering is, and has been, a fundamental enabling component of the business of television. It provides the fabric from which content is created, captured, transmitted and received.

This evening’s honorees were selected by The National Academy of Television Arts and Sciences’ Engineering Achievement Committee and the Television Academy’s Primetime Engineering Committee. The selection process for recognition is rigorous and above reproach, making the Emmy® Awards one of the most recognized and prestigious in the technology, engineering and science arena and coveted globally. These committees are chaired respectively by Robert Seidel and Wendy Aylsworth and I thank them and for their leadership, hard work and diligence with their committees in selecting the honorees.

I personally could not be more pleased that tonight the technical community can celebrate the achievements and recognition of the honorees together here in Las Vegas. A special thank you to the Television Academy’s Chair and CEO, Bruce Rosenblum, whose leadership and vision of a single event, working with former NATAS Chairman, Malachy Wienges, made tonight possible.

I would especially like to thank the NATAS Executive Committee, our Board of Trustees and our Awards Committee Chair, Linda Giannecchini, in addition to our New York-based staff led by our President Bob Mauro, for their support, guidance and counsel in making this evening a success.

Finally, a thank you to our hosts — multiple Emmy Award winner, Alex Trebek, and David Pogue, Yahoo Tech founder and CBS News contributor.

All the best,
Charles L. Dages, Chairman
The National Academy of Television Arts & Sciences

A Message from the Chair, Bruce Rosenblum

Welcome to the 66th Annual Technology & Engineering Emmy Awards. Today more than ever, technology drives both the art and commerce of the entertainment industry, and it is a pleasure to have you with us to celebrate so many extraordinary achievements.

Tonight is noteworthy for a number of reasons. First and foremost, for the remarkable accomplishments of the individuals and organizations being honored with Emmys. It is also noteworthy for the inspired pairing of our hosts, game show icon Alex Trebek and Yahoo Tech founder David Pogue.

Finally, it is a milestone because it marks a collaboration between the Los Angeles-based and New York-based Television Academies. On behalf of the L.A. Academy, I am delighted to be working together with our counterparts on the East Coast, and I look forward to further opportunities in the future.

This evening would not be possible without The National Television Academy’s Engineering Achievement Committee, chaired by Robert Seidel, and the Television Academy’s Primetime Engineering Committee, chaired by Wendy Aylsworth. I thank them for their hard work and dedication in selecting tonight’s honorees.

In addition, I thank my colleagues on the Television Academy’s Executive Committee and Board of Governors for their support. I also thank John Leverence, our senior vice president of awards, for his strong and steady oversight of this and all of our awards processes, along with our professional staff, led by president and COO Maury McIntyre.

All my best wishes for a terrific New Year.
Bruce Rosenblum, Chairman & CEO
Television Academy
WELCOME

A Message from the Committee Chairs

Welcome to the combined Technology and Engineering Emmy® awards ceremony of The National Academy of Television Arts and Sciences (NATAS) and the Television Academy. Our honorees represent the best in Engineering Achievement for the television professions that continue to evolve entertainment technology for the viewer and programmer alike.

This year NATAS’ Lifetime Achievement honoree is Kazuo Hirai, President and Chief Executive Officer of Sony Corporation, who is being recognized for his contributions that have materially affected the television viewing experience with such technologies as PlayStation, Video and Music Unlimited Services and a host of other consumer electronics innovations. For 2014, the Television Academy recognizes the Society of Motion Picture and Television Engineers (SMPTE) with the Philo T. Farnsworth Award for Lifetime Achievement for the many contributions of that organization to the advancement of the medium. In addition, the Academy’s Charles F. Jenkins Lifetime Achievement Award honors Larry Thorpe for his contributions that have significantly affected the state of television technology and engineering.

As Chairs of the NATAS and Television Academy Engineering Achievement Committees, we are very fortunate to have the assistance of many dedicated and knowledgeable committee members, whose tireless efforts ensure that these awardees and technologies are the best in the industry. Special thanks to the NATAS Co-chair, Seth Haberman and Chairman Emeritus, Charlie Jablonski, for their ongoing assistance. Additional thanks to the NATAS Awards Committee, Chaired by Linda Gianneccini, The National Academy’s new Chairman Chuck Dages, as well as the NATAS Headquarters staff who make these awards a pleasure to be a part of and thanks to the Television Academy and NATAS Executive Committee and Board of Trustees for their support.

Sincerely,
Robert P. Seidel, Chair
The National Academy of Television Arts & Sciences
Engineering Achievement Committee

Wendy Aylsworth, Chair
Television Academy
Engineering Achievement Committee

ABOUT THE ACADEMY

The National Academy of Television Arts & Sciences (NATAS) is a professional service organization dedicated to the advancement of the arts and sciences of television and the promotion of creative leadership for artistic, educational and technical achievements within the television industry. It recognizes excellence in television with the coveted Emmy Award for News & Documentary, Sports, Daytime Entertainment, Daytime Creative Arts & Entertainment, Public & Community Service, and Technology & Engineering. NATAS membership consists of over 14,000 broadcast and media professionals represented in 19 regional chapters across the country. Beyond awards, NATAS has extensive educational programs including Regional Student Television and its Student Award for Excellence for outstanding journalistic work by high school students, as well as scholarships, publications, and major activities for both industry professionals and the viewing public. For more information, please visit the website at emmyonline.tv

The Television Academy seeks to expand the horizons of television excellence. It strives to empower the storytellers who shape the evolving television space through the programs, publications and events of the Academy and its Foundation. And it celebrates those who have led excellence by recording their stories and recognizing their achievements through accolades and awards, including television’s most coveted prize, the Primetime Emmy Award. For more information, please visit TelevisionAcademy.com
Non-Live Large Scale Online Video Systems  
Netflix

Development of Low Latency Video Streaming Live Captioning Systems  
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Personalized Recommendation Engines for Video Discovery (PREVD) for MVPD’s  
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Secure Accelerated File Movement Over IP Including the Internet  
Aspera Inc., an IBM Company  
Data Expedition, Inc.  
Signiant  
Unlimi-Tech

Multi-format HDTV CCD  
Sony Professional Solutions of America

Standardization and Productization of JPEG2000 (J2K) Interoperability  
Artel Video Systems, Inc.  
Barco-Silex  
DVBLink Inc.  
Ericsson  
Harris Broadcast (Imagine Communications)  
IntoPIX  
Media Links  
Nevion  
Video Services Forum (VSF), Inc.

High-Definition Multimedia Interface (HDMI)  
Hitachi  
Panasonic (Matsushita Electric)  
Philips  
Silicon Image  
Sony  
Technicolor (Thompson) RCA  
Toshiba

High-bandwidth Digital Content Protection (HDCP)  
Intel Corp.

Charles F. Jenkins Lifetime Achievement Award  
Laurence J. Thorpe

Pioneering Delivery of Pay-TV Linear Video to Consumer Owned and Managed Devices Over an IP Connection  
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LDK6000, DPM CCD Multi-format HDTV Camera System  
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Pioneering Development of 2nd Screen Navigable Mosaic for Direct Programmer Offerings to Consumers via the Internet  
Home Box Office  
Netflix

Innovation in Improving Engagement Around Television in Social Media  
Mass Relevance (Spredfast)  
Twitter

Lifetime Achievement Award  
Kazuo Hirai
TECHNOLOGY & ENGINEERING EMMY® AWARDS

HONOREES

This year, the New York-based National Academy of Television Arts & Sciences (NATAS) and its Los Angeles-based sister organization, the Television Academy, have joined together to present the Technology & Engineering Emmy Awards from both organizations in a joint January 8, 2015 ceremony at the Bellagio Hotel in Las Vegas. The Emmys awarded celebrate engineering from all aspects of the television community; this year, there are nearly four dozen winners in 14 categories. They reflect the rapid changes of recent years brought about by the industry’s transition to digital, and the widespread use of broadband, with winners in categories that wouldn’t have been thinkable a decade ago, such as improving engagement around television through social media. Here are this year’s honorees:

Non-Live Large Scale Online Video Systems

It was only seven years ago that Netflix launched its online streaming service, which is being recognized for its work in Non-Live Large Scale Online Video Systems. Today, Netflix delivers “over two billion hours of shows and movies every month to more than 50 million paying subscribers in more than 60 countries,” said Neil Hunt, Netflix’s chief product officer, including acclaimed original series such as “House of Cards” and “Orange is the New Black.” The service pioneered the concept of binge-viewing, or watching all episodes of a series at once, rather than in weekly installments, and was

CBS congratulates EEG, recipient of a 2014 Technology and Engineering Emmy® Award for its development of Low Latency Video Streaming Live Captioning Solutions.
“amongst the first distributors to deliver UHD 4K content,” Hunt said. In the U.S., Netflix traffic accounts for more than one-third of the primetime Internet traffic. “There is a plethora of data confirming that ‘non-live’ video platforms have made

**NETFLIX**

a very significant impact on TV in recent years,” said Robert P. Seidel, vice president of CBS Engineering and Advanced Technology and Chairman, Engineering Achievement Committee, NATAS. Seidel added, “In considering Emmy worthiness, the very dominant size of Netflix cannot be ignored.”

**Development of Low Latency Video Streaming Live Captioning Systems**

EEG Enterprises and Xorbit are recognized for their work in this area. Closed captioning, a process developed in the 1970s that has made television accessible for so many with impaired hearing, grew less reliable with the transition to digital. In the past, the remote stenographers supplying the closed captions received their audio over phone lines and dial-up modem connections. Those lines have been increasingly replaced by digital VoIP connections, and audio and video were delayed, due to digital compression, and as a result captions trailed program audio by nine to ten seconds, said Philip T. McLaughlin, chief executive of EEG Enterprises. EEG’s iCap system, introduced in 2008, “improved the quality of closed captioning services for the viewer while simultaneously lowering operating costs for broadcasters and caption service providers,” he said. The system “improves the speed and accuracy of real-time captioning, in part by using higher-quality IP delivered audio for captioning, and in part by decoupling the broadcast audio timing from the input to the captioner,” Seidel said. Today, iCap’s cloud-based system “handles over one million minutes of live captioning per month provided by thousands of full time captioners employed by dozens of captioning service providers,” McLaughlin said. Users include CBS, Turner Entertainment, CNN, the Univision Networks, ABC, and a large number of local broadcast stations. Xorbit’s system, introduced in 2004, addresses the problem of Internet bandwidth that “varies from location to location around the world,” said Steve Blumenschein, founder and president. Xorbit’s system “can sense what the bandwidth is like at the far end of our distribution,” he said. Seidel noted that more than 100 caption writers in many countries have now used it.  

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Personalized Recommendation Engines for Video Discovery (PREVD) for MVPD’s

Work in this category spans some three decades of technology development in areas including “algorithm design, machine learning, large-scale system design, User Interface Integration and relentless testing and improvement,” Seidel said. Jinni, ThinkAnalytics, TiVo’s Digitalsmiths and Comcast are being honored, with the work specifically for video “among the most influential and seminal,” Seidel said. “Movies, and more generally video, provided a unique framework for recommendations because of the broad appeal, high volumes of consumption, the ability to collect implicit and explicit feedback and the ability to use that data to test and improve the quality of the recommendations. It is for these reasons that it is clear that video recommendation systems not only materially affected consumption of video, but also drove improvements in the underlying technology. The companies made instantaneous recommendations an integral part of the experience of watching video on broadband at scale likewise were worthy of an Emmy.” ThinkAnalytics, founded in Glasgow in 1995, originally worked in the telco and cellular data mining markets, before adapting the work to cover...
We’re honored

Comcast thanks the National Academy of Television Arts & Sciences for honoring our personalized content discovery platform with a Technology & Engineering Emmy Award.

And we join in congratulating all the honorees for their work in advancing the future of entertainment.
Video On Demand and linear content. Among its “firsts” was developing “the first personalized content recommendations solution in 2005,” said Peter Docherty, chief technology officer. Today, the work is focused on systems that transfer personal profiles across devices, he said. Jinni’s Entertainment Genome, meanwhile, was “designed with entertainment in mind,” said Marvin Michael, the company’s media and marketing manager. At the company, in-house film and TV content specialists work hand-in-hand with the research and development staff.

**Recommended Practice on Techniques for Establishing and Maintaining Audio Loudness for Digital Television**

The Advanced Television Systems Committee (ATSC) is being recognized for its Recommended Practice on Techniques for Establishing and Maintaining Audio Loudness for Digital Television. ATSC acted in response to public pressure to limit what had become a major difference between audio levels in programming and commercial. The pressure led to impending legislation on the issue, prompting ATSC to take action. The committee’s recommended practice used newly refined techniques for quantifying apparent loudness and codified audio loudness as RP A/85, Seidel said. Now mandated by the FCC under the CALM Act of 2010 (which was effective December 2012), this automated method of addressing audio loudness led to dramatically improved consumer satisfaction.

**Television Enhancement Devices**

The spread of broadband has ushered in numerous ways to watch television other than by traditional broadcast channels or via satellite, telco and cable operators, and spawned an entire generation of alternative devices. Roku, Microsoft, Sony and TiVo are honored for their individual television enhancement devices — set-top boxes or connected so-called “smart” TVs — that have given consumers a way to bridge the Internet and their television sets without having to resort to their PCs or more cumbersome methods. These new devices allow easy on-demand access to multiple sources of content and vast libraries of movies and TV shows. Consumers have responded: to date, more than 25 million smart TVs and 15 million TV enhancement devices have been sold, Seidel said.

**Secure Accelerated File Movement Over IP Including the Internet**

With the advent of digital production and high definition in particular, motion picture and television companies needed a way to transfer huge files from the set to production, and the links had to be secure and reliable. Aspera Inc., an IBM Company; Data Expedition, Inc.; Signiant and Unlimi-Tech are recognized for their work in secure accelerated file movement over IP including the Internet. The technology has sped up broadcast-related workflows, Seidel said. Field-based newsgathering has also benefited. The Associated Press, for one, gives Data Expedition Inc. software to reporters in the field so they can send in video quickly, a system that was put to good use during the Iranian election crisis in 2009, said Seth B. Noble, the company’s president and founder. “The central function of our software is to move data very quickly over any network that is linked,” he said. “Our software is all about making maximum use of whatever data path you give it.” The technology, Seidel said, has also “made it easier to share more content across geographically dispersed locations,” including large-scale events such as the Olympics. When entertainment companies started to adopt Unlimi-Tech technology around 2004 or 2005, “our product wasn’t as fast as was needed,” said Chris Bailey, the company’s co-founder and chief executive. By reinventing the way files were transferred, the company dramatically sped up the process, he said, and NBC used the technology in its 2014 Sochi Olympics coverage.
Delivering the best screen to every screen

MLBAM thanks The National Academy of Television Arts & Sciences for honoring its work in live video streaming technology.

We are proud to bring the very best experiences to baseball fans and our news, sports and entertainment partners.
HONOREES  continued from page 10

Multi-format HDTV CCD Camera

Sony Professional Solutions of America’s Multi-format HDTV CCD Fiber Optic Camera System “provides superior HDTV image quality in a progressive video format,” and its flexibility “gives TV producers the ability to produce their HDTV show in any desired HD format,” which has made it the camera of choice for HDTV studio operations, said Seidel. The Sony HDC1500 was first used in 2005 on Fox's hit “American Idol,” produced at CBS's Television City Studios.

Standardization and Productization of JPEG2000 (J2K) Interoperability

For their work in the Standardization and Productization of JPEG2000 (J2K) Interoperability, the judges recognize Video Services Forum (VSF), Inc., Media Links, Nevion, DVBLInc, Harris Broadcast (Imagine Communications),

Ericsson, Artel Video Systems, Inc., Barco-Silex, and IntoPIX. Broadcasters now make extensive use of JPEG2000 (J2K)-based IP transmission for high quality contribution feeds and studio interconnect, said Seidel, but that wasn't the case in 2000 when it was developed. The members of the Video Services Forum established an “ecosystem” to resolve issues with the existing standard that had previously made interoperability impossible, he said, adding, “They also provided a place where the industry could reach agreement on important elements of this work, such as the carriage of audio and data, in ways that may be freely implemented in the market place.”

High-Definition Multimedia Interface (HDMI)

Hitachi, Panasonic (Matsushita Electric), Philips, Silicon Image, Sony, Technicolor (Thompson) RCA and Toshiba are recognized for their work on the creation of High-Definition Multimedia Interface (HDMI). The HDMI interface, which delivers high-quality digital audio, video and auxiliary data to home entertainment devices through a single cable, has become “the universally-implemented, standardized, digital
connection for consumer electronics devices," the HDMI group said, delivering “crystal-clear digital quality” and greatly simplifying the consumer experience with digital content. There are now more than four billion HDMI-enabled products on the market.

**High-bandwidth Digital Content Protection (HDCP)**

Intel Corp. is being recognized for its creation, in concert with HDMI, of High-bandwidth Digital Content Protection (HDCP), which discourages unauthorized redistribution and copying of copyrighted content. The universally implemented protocol has been widely adopted, and supports billions of device interfaces used by consumers worldwide.

Pioneering Delivery of Pay-TV Linear Video to Consumer Owned and Managed Devices Over an IP Connection

These services have quickly become ubiquitous, with numerous companies offering pay TV linear video directly to consumers’ devices, over an IP connection. The work of Major League Baseball Advanced Media, Time Warner Cable and NBCUniversal is singled out for honor, as the committee looked for those providers with a multi-channel pay-TV service that “most closely resembles the traditional pay-TV service,” Seidel said. Mike LaJoie, who retired as Executive Vice President and Chief Technology and Network Operations Officer at Time Warner Cable at the end 2014, recalled the moment about six years ago when, looking at the fast adoption of smart phones, it became obvious that as “people’s entire lives were showing up more and more on their

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personal devices” they were also going to expect to get all of their entertainment there. To maintain value for customers, “we needed to make any content available anywhere, at any time, on any device,” he said. The company’s work predated the launch of the iPad, he said, but the arrival of tablets only accelerated consumer adoption, with demand growing 150 percent a year, he added.

LDK6000, DPM CCD Multi-format HDTV Camera System

Philips Professional Broadcasting is recognized for its LDK6000, DPM CCD Multi-format HDTV Camera System, which was first demonstrated in 2000. The system uses the company’s patented Dynamic Pixel Management (DPM) imager technology, which enables the camera to capture multiple video formats and frame rates without physically changing the image sensor. Coupled with a mechanical blade shutter, the system eliminates distortions in other sensors and has been used for remote sports and entertainment productions, including the 2005 Super Bowl and the Academy Awards.

Pioneering Development of 2nd Screen Navigable Mosaic for Direct Programmer Offerings to Consumers via the Internet

The rise of vast digital libraries of content available to consumers via the Internet brought with it a need for a way to sort through the many offerings. Home Box Office and Netflix, two companies that offer such programming, are recognized for their work developing ways for consumers to sort through hundreds of thousands of linear and Video on Demand choices and make a selection with just “a few swipes across an intelligent second screen,” Seidel said. Choices are almost instantly tuned in, a major change from the past, when VOD selection could mean 18 or more clicks and older linear set-top boxes were so slow to register a choice that consumers might miss the beginning of a show, Seidel noted. Mosaic-based navigation has made the process much easier especially for children, as well as those not fluent in English. Neil Hunt, Netflix’s chief product officer, said, “for millions of years, humans have had choices of one, two, or a small number of selections (of meal, mate, campfire story).” In the last few dozen years, technology has broadened our choices into hundreds or thousands, and we have dealt with it by artificially limiting choice to the most popular, the new, or the present. This is weak, limiting, and unsatisfying.” He added, “many teams at Netflix have collaborated to produce a more effective content choosing tool using a tablet, phone, or laptop screen at the couch in front of a TV.” The catalog is organized and presented in a novel and compelling mosaic on the user’s second screen. Direct interaction on the touch screen allows more effective choosing, while a single touch “casts” the user’s selection to the shared, large, high-quality viewing screen in the room.

Innovation in Improving Engagement Around Television in Social Media

This year’s honoree Twitter was only founded in 2006 but it has changed the way viewers interact with the television they watch, and spawned companies such as honoree Mass Relevance (Spredfast), which offers technology and platforms to help brands and media companies with their social marketing. While other social media platforms exist, Twitter dominates when it comes to how viewers engage with television in real time and on a large scale. News, sports, reality shows and special events like the Presidential election are particularly well-suited to immediate viewer response; when it comes to scripted programs, producers have a more hands-on role in generating conversations, Seidel noted.●
HBO Proudly Supports
THE NATIONAL ACADEMY OF TELEVISION ARTS & SCIENCES

And Congratulates
OTTO BERKES
And All Of Tonight's Honorees
SEE IMPOSSIBLE
As Larry Thorpe Does

As a true innovator in imaging technology we would like to thank Larry Thorpe for seeing impossible and going beyond. Larry, you have brought beautiful, inspiring and important images to life for billions. We’re honored to call you a friend and colleague, and we congratulate you on receiving the 2015 Charles F. Jenkins Achievement Award.
Laurence J. Thorpe, this year’s winner of the Charles F. Jenkins Lifetime Achievement Award, is an accomplished product manager and marketing executive widely credited with a leading role in the establishment of HDTV. But key to his success, colleagues said, are his roots in the engineering world.

The award, given by the Television Academy, honors a living individual whose on-going contributions have significantly affected the state of television technology and engineering. In addition to his HDTV work, Thorpe, a Life Fellow of the Society of Motion Picture and Television Engineers (SMPTE), led the development of an important RCA camera, the TK47, and has published numerous papers on camera technology. He has also served as an advisor to the Advanced Television Systems Committee (ATSC), the Federal Communications Commission and SMPTE.

The 74-year-old Thorpe, “has had a long, long career, and he has accomplished very significant things in every step of the way,” said Hugo Gaggioli, the chief technical officer of Sony Broadcast & Professional Solutions Company.

Raised in Dublin, Ireland, the son of an engineer, Thorpe said he became interested at a young age in all things technical. He is a 1961 graduate of the College of Technology in Dublin, and received his Chartered Engineer and MIEE distinction the same year from the Institute of Electrical Engineers in London.

At his first job at the BBC, starting in 1961, he was in a design group developing color equipment for the BBC studios.

“I think he was one of the world’s best television camera designers,” said David Robinson, a retired Dolby Labs executive, who overlapped with him at the BBC (although they worked in different departments.)

In 1966, “RCA lured me to the U.S.,” Thorpe said. That was at the height of NASA’s program, and “They couldn’t find broadcasting engineers in the U.S. because they were all going into the aerospace business.”

He spent 16 years at RCA, where he was the project leader for the team that developed the TK47, RCA’s last full-sized studio camera. Introduced in 1978, the camera remained in wide use until the mid-1990s. As a result, in 1981, Thorpe won SMPTE’s David Sarnoff award for innovations in automatic studio color cameras. Thorpe, who holds ten patents based on his RCA work, called the project the career achievement “I look back on with the greatest pride.”

In 1982, Thorpe’s pure engineering career ended, when he moved to the relatively new Sony Broadcast Company. In 1984, he was charged with creating a market for high-definition video in the U.S., “but there was no interest,” Gaggioli recalled.

“We were the upstart bringing a technology they felt they didn’t need or want,” Thorpe said of the challenge he was presented.

So Thorpe and his team, including Gaggioli, set about the long-term business of building interest, including targeting medical users and industrial designers, at first, because the television community wasn’t ready. They also worked through the ATSC, which created the digital standard for HD broadcasting. Thorpe worked on SMPTE working groups dealing with High Definition Electronic Production, and the FCC Advisory Committee on Advanced Television.

In addition, they targeted the Hollywood film community.

“Around 1997 we started an agenda to be pretty serious about using digital imaging” in motion pictures, Thorpe recalled. “That started me on a digital cinematography agenda.” He describes himself “a cinema buff, first and foremost.”

“He wrote what I consider to be seminal, very powerful papers in the 90s describing the capability of the electronic sensors to emulate” film, Gaggioli said.

Gaggioli thinks his mentor has been so successful for a number of reasons. “His power is not only his understanding
of the engineering side and the technology side but he will explain in easier terms the technology that is coming from Japan. He will digest the technology, understand it, and present it in the most beautiful graphics, slides or PowerPoints.” The two often joke about “who has more slides,” Gaggioni said, “but I learned from him the power of the graphical communication.”

Also at Sony, Thorpe said he “nudged” the company into going into the studio camera business, a sector where they are now number one in the world.

In 2000, Thorpe won the Montreux 2000 Gold Medal Award for Digital Cinematography for his work in helping to develop and establish the 1080/24p digital format. He also received the National Association of Broadcasters’ 2000 Television Engineering Achievement Award, and, in 2004, the Broadcasting & Cable Technical Leadership Award. In 2007 he was inducted into the Sports Video Group’s Hall of Fame for his contributions to introducing advanced technologies into television sports coverage.

In 2004, Thorpe retired from Sony in what he said was supposed to be “a soft landing.” Two weeks later he was working for Canon, and “here it is ten years later and I’m still working full time.” He is currently a Senior Fellow in the Professional Engineering & Solutions Division of the Imaging Technologies & Communications Group.

At Canon, Thorpe initially switched fields again, from the camera to the lens side. Lenses at that point were somewhat of an “afterthought type of accessory,” Gaggioni said. Thorpe schooled himself, began writing white papers on lenses, and turned them into “something of a magical thing,” he said, intending to elevate Canon’s profile in diverse professional optical markets. More recently, he has been assisting in marketing Canon’s new line of cinematography lenses and cameras.

Thorpe has also been able to tap into another personality trait as he worked his persuasive charm on the business, friends said.

“He’s full of the Irish blarney; he’s a very, very personable guy,” said Robinson. “He’s always the life and soul of the party, in any gathering,” he added.

“If he were to use Facebook, he would just explode Facebook,” said Gaggioni. “He has thousands of people who know him, he’s so friendly and open. He listens with attention to your words.”

Thorpe said the key to his varied career is “I’ve lived a long time; that’s the secret.”

Having already retired once, how long will he keep working?

“That’s a good question,” he said. “As long as I’m useful.”

The Society of Motion Picture and Television Engineers (SMPTE)

Philo T. Farnsworth Award

The Society of Motion Picture and Television Engineers (SMPTE), this year’s recipient of the Television Academy’s Philo T. Farnsworth Award, which honors an agency, company or institution whose contributions over time have made a significant impact on television technology and engineering, has been around longer than television as we know it.

SMPTE was founded in 1916 at the urging of the U.S. government, as simply the Society of Motion Picture Engineers.

As the U.S. Army eyed motion pictures as a valuable tool for training as well as for documenting military events, it recognized the need for standardization that could be applied by the different manufacturers of motion picture technology as a means to bring order to the chaotic fledgling motion picture industry. Inventor Charles F. Jenkins — who had developed the first motion picture projector with Thomas Armat in 1895 — was asked to form the Society to do this work.

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Fittingly for this year’s award, Jenkins was a Farnsworth rival in the race to develop television technology for the consumer world. Jenkins died in 1934. By 1950, with television finally taking off, the Society, a professional membership organization, increased its scope to include television standards.

SMPTE’s notable contributions to television technology, as the award citation records, include its “trademark color bars and their core high-definition (HD) work including the Emmy Award-winning high-definition serial interface (HD-SDI) standard. Along with being responsible for the newly published and developed standards for the next generation broadcast format characteristics of ultra high-definition (UHD) television, high-dynamic-range (HDR) and immersive audio, SMPTE continues to contribute to the television ecosystem as it expands into a wide array of distribution channels enjoyed on omnipresent devices.”

Throughout the years, SMPTE has been honored nine times by both NATAS and the Television Academy. It also received a 1957 Oscar from the Academy of Motion Picture Arts and Sciences for contributions to the advancement of the motion picture industry.

“From the very beginning we were founded to solve a very specific problem, and that has carried us through almost 100 years,” said SMPTE’s executive director, Barbara Lange. “To help clear out the chaos that occurs when there’s innovation, there needs to be some measure of normality, so that organizations can thrive and succeed.”

In its nearly 100 years, SMPTE has developed more than 800 standards, recommended practices, and engineering guidelines, across both motion picture and television technology.

The standards, in addition to bringing order to the technical world, also ensure consumers receive a consistent quality experience. The SMPTE Color Bars is a television test pattern that ensures that color is calibrated correctly on broadcast monitors and video cameras, while the SMPTE Time Code gives each video frame a unique ID number, which makes digital editing possible, synchronizes music, and underpins hard news, live sports and entertainment productions alike.

“You couldn’t imagine doing anything these days without any sort of time stamp,” Lange says.

SMPTE Timed Text, meanwhile, “is accelerating the transition of broadcast content to the Internet and makes it more accessible to tens of millions of people in the U.S. with disabilities,” the organization says, while SMPTE Transport of High Bit Rate Media signals over IP Networks (HBRMT) “creates a standardized framework for the transport of video over Internet Protocol (IP) networks.”

SMPTE 292 is a standard for high-definition digital video transmission “is the foundation for the family of serial digital interface (SDI) standards for transmitting uncompressed HD video signals,” NATAS noted in honoring it in 2014, adding that it “has proven to be robust and versatile, and a large number of additional standards have been created” based on it.

SMPTE’s challenge is “to make sure we are focused and not pulled in too many directions,” Lange said. Projects are proposed and if adopted, get assigned to a working group.

The transition to digital has made SMPTE’s work as vital as ever. “All aspects of bigger, better, more pixels is something that’s been discussed now for the last couple years, Lange said. “With all this higher resolution comes lots of questions and problems to be solved,” including compression and color, she said, adding, “A lot of work is being done on how to improve the quality of that image.”

Other major areas of work include immersive audio, and laser projection, she said.

In addition to standards, SMPTE’s mission includes education, through annual conferences, seminars, webcasts and its journal, SMPTE Motion Imaging Journal. Its growing community includes more than 6,000 individual members and 240+ corporate members worldwide, up after a recession-related dip, with 40 percent of its members coming from outside North America.

More and more of the new members work in the world of Internet content. “They’re interested in the quality of the motion image in their own ecosystems,” Lange said. “I like
to say we’re running a 100-year-old startup, because it’s all different now,” she said.

SMPTE is also in the process of consolidating its work with that of the Hollywood Post Alliance (HPA), which will “marry the creative and technical communities,” Lange said. The two organizations have been working together since announcing their intent to merge in June 2014. The consolidation is expected to be finalized in May 2015.

SMPTE will kick off its 100th anniversary celebration a bit early, in July 2015, at the biennial conference and exposition it holds in Sydney, Australia. Most of the centennial activities will be focused on 2016, however. Plans are still being made, and will include a commemorative book and possibly a documentary, “to tell the story of the technology and how it impacted us and how we impacted the industry,” Lange said. The festivities will culminate in October 2016 at a gala event planned to coincide with SMPTE’s Annual Technical Conference & Exhibition in Hollywood.

As it looks to the future, SMPTE has kicked off the SMPTE Centennial Campaign: The Next Century Fund, inviting organizations to contribute in “a much more substantial way,” Lange said. Already, three donors have stepped forward: The Walt Disney Company, Panasonic and Dolby. The money, Lange said, will be invested in SMPTE’s three pillars of work — standards, membership and education — and “sets us up for new projects,” such as a focus on bringing in student members.

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THANK YOU TO OUR PATRON SPONSORS
Sony's Kazuo Hirai is the recipient of a Technology and Engineering Lifetime Achievement Award from The National Academy of Television Arts & Sciences. In his 30-year career at Sony, Kazuo Hirai worked his way up from an entry-level job that occasionally involved translating when artists such as the Beastie Boys toured Japan to become the president and chief executive of Sony Corporation.

"With his wide grasp of our fast-changing digital world, from his leadership marketing international music through Sony Music Entertainment, his successful stewardship of Sony’s PlayStation® business and his integration and innovation across all of Sony’s consumer electronics products and services, Kazuo Hirai has proven to be a visionary in the evolution of technology in our industry,” said Seth Haberman, co-chairman, NATAS Engineering Achievement Committee, in announcing the honors.

The committee’s chairman, Robert P. Seidel, Vice President of CBS Engineering and Advanced Technology, cited Hirai’s “leadership, innovation and vision in helping to set the standards for technological excellence in our industry.”

Hirai was born in Tokyo in December 1960, and starting at age 6, spent several years of his childhood living in Canada as well as New York City, where he attended Public School 13 in Queens.

In addition to giving him fluency in English as well as

continued on page 24
Best Buy honors Kazuo Hirai for building Sony into a global leader in electronics and entertainment

Transformational global business leader
Visionary executive
Technological innovator
National Academy of Television Arts & Sciences Lifetime Achievement Award Winner
Japanese, that dual cultural experience aided his career by allowing him to look at issues “from both perspectives,” Hirai said. “When I make business decisions, I’m able to articulate why that decision was made the way it was, from a cultural as well as a business perspective, which is so important in managing a global company involved in many different businesses.

Moreover, Hirai said, in business, sometimes the best strategy is to “agree to disagree. And I’m comfortable with that, because people just have so many different backgrounds culturally, demographically, age, gender, and you learn to embrace that diversity a lot more than a lot of Japanese folks because it’s a pretty homogenous society. And I was fortunate to be exposed to different perspectives at a young age.”

After graduating from the International Christian University in Tokyo, Hirai joined CBS/Sony Inc. now Sony Music Entertainment (Japan) (SMEJ), in 1984, partly because, he once told the Wall Street Journal, he believed the company offered “a ‘rock ‘n roll’ lifestyle.” He worked in the marketing of international music in Japan, and later ran the international business affairs department. He subsequently led the marketing of SMEJ artists in the U.S., from the New York office.

“I wanted to be able to work in an environment where, I can come to work wearing jeans; where it was a lot more liberal, and less burdened by protocol,” Hirai said.

After more than a decade in music, Hirai moved to Sony Computer Entertainment America, in 1995, just after the company launched PlayStation®, its rival to Nintendo Co. Four years later he was appointed its president and chief operating officer, responsible for operational management of the company’s U.S. videogame business, and in 2003 he was elevated to chief executive officer.

Of his interest in moving from music to video gaming, Hirai tells an anecdote: in September 1995, the day PlayStation® launched was also the publication day for an English CD album for a Japanese artist, which Hirai had worked on.

“After going to all the record shops around town without finding the album, I went to check out the PlayStation® because I was helping them out…and see what’s going on,” he recalls. Lines were forming around the videogame retailers. “And I realize that both are exports from Japan, but, there’s obviously a huge market for the PlayStation®.”

Hirai was a high-profile leader for PlayStation®, promoting it at the E3 trade show in Los Angeles, and it quickly became a profitable hit, helping elevate video games in
the U.S. as an entire alternative entertainment genre.

By 2006, he was made president and group chief operating officer of Sony Computer Entertainment Inc. (and group chief executive officer in June 2007), which extended his responsibilities to the company’s worldwide game business, and gave him a mandate to turn around the just-launched money-losing PlayStation® 3. That turnaround became one of the major accomplishments of Hirai’s Sony career.

“That there is a book right there!” Hirai said when asked of how he approached the challenge. Broadly, he said, he changed the device’s positioning, emphasizing that it was “first and foremost a video game console and not a supercomputer for the home, and all the other stuff that everybody was trying to make it to be. Later, we talked about all the other things that you can do besides gaming on the PS3™.”

The growth of the PlayStation® Network laid the foundation for Sony’s subsequent expansion into other online networked services. In 2009 Hirai was named president of Sony Corporation’s Networked Products & Services Group, and a Corporate Executive Officer, and two years later, the President of Sony’s Consumer Products & Services Group, overseeing Sony’s entire portfolio of consumer electronics products and digital networked services.

In April 2012, Hirai moved up to the top as Sony Corporation’s President and CEO, Representative Corporate Executive Officer, succeeding Sir Howard Stringer, (who was honored in 2010 with a Technology and Engineering Lifetime Achievement Award.) In June of that year Hirai was named as a Director of the Sony board.

Harkening back to the lessons of his multicultural childhood, Hirai said his exposure early on to diversity “helps when running such a diverse, global business like Sony. “The fact that I joined a music company from which I went to a video game company, then managing the electronics business, and finally being given the responsibility for the entire organization, even within Sony, I think I’ve been very fortunate to be able to have that diverse experience, and therefore, very divergent perspectives,” he said. Music employees are different from the financial services employees, “but we all work for Sony. So, because I’ve been to a lot of these different places...I’d like to think that I’m a little bit more sensitive to the differences of the business units, or the various businesses that we’re in.”

Hirai’s increasing responsibilities have not left as much time for his outside pursuits: “cameras, bikes, watches, cars, A/V equipment, radio controlled models, plastic models, model railroading, I love all that stuff.” But he said, he always tries to switch off for at least some period on the weekends, whether it’s an hour or 24 hours. And he adds, “I always say this as well: I don’t worry about stuff I can’t control.”
TAKE-TWO INTERACTIVE

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and service to our industry.
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**THIS YEAR’S HOSTS**

**Alex Trebek**

Alex Trebek has hosted nearly 7,000 episodes of “Jeopardy!” since its syndicated debut in 1984. Over the past 31 years, he has become one of television’s most enduring and iconic figures, engaging millions of viewers worldwide with his impeccable delivery of “answers and questions.”

Trebek made his American television debut in 1973 as the host of the NBC game show “The Wizard of Odds.” After several other hosting roles, Trebek was chosen to host “Jeopardy!” He was a hit with viewers and quickly became a pop culture icon. He has been honored with a coveted star on both the Hollywood Walk of Fame and the Canadian Walk of Fame in Toronto, making him one of only a handful of entertainers honored by both the United States and Canada. In 2013, Trebek was ranked #8 in a Reader’s Digest poll of the 100 Most Trusted People in America.

In addition to his hosting duties, Trebek has a long-standing commitment with numerous charities and educational organizations. In 2013, he was awarded the Alexander Graham Bell medal from the National Geographic Society for his 25 years as host of the National Geographic Bee. Trebek has participated in 13 USO tours and was a recipient of the USO Bob Hope Award for his achievements in entertainment and commitment to America’s troops. With World Vision, Trebek has traveled to many Third World countries reporting on the group’s efforts on behalf of children around the world. He has traveled with his family to Zambia, where he adopted a village and helped build a school, homes for teachers, and a medical facility.

In 2013, Trebek was inducted into the Broadcasting and Cable Hall of Fame, and he was also honored as one of the “Giants of Broadcasting,” a designation awarded by the Library of American Broadcasting. Trebek and “Jeopardy!” received the Peabody Award in 2011 for “encouraging, celebrating and rewarding knowledge”; that same year, Trebek received the Lifetime Achievement Award from The National Academy of Television Arts & Sciences. Additionally, Trebek has won five Daytime Emmy Awards for Outstanding Game Show Host.

Trebek and his wife, Jean, live in Studio City, California. They have two adult children, Emily and Matthew.

**David Pogue**

David Pogue is the founder of Yahoo Tech, having been groomed for the position after 13 years as the personal-technology columnist for The New York Times. He’s also a monthly columnist for Scientific American and host of science shows on PBS’ “NOVA.” He’s been a correspondent for “CBS Sunday Morning” since 2002. Pogue wrote for MacWorld magazine from 1988–2000. His back-page column was called The Desktop Critic. Pogue got his start writing books when Macworld-owner IDG asked him to write Macs for Dummies. Today, with over 3 million books in print, David is one of the world’s bestselling “How-to” authors. He wrote or co-wrote seven books in the “for Dummies” series (including Macs, Magic, Opera and Classical Music); in 1999, he launched his own series of complete, funny, computer books called the “Missing Manual” series, which now includes 120 titles.

Starting November 2000, Pogue served as the personal-tech columnist for The New York Times; his column, “State of the Art,” appeared each Thursday on the front page of the Business section. He also writes “From the Desk of David Pogue,” a tech-related opinion column that is sent to readers by email. He also maintained a blog at nytimes.com called Pogue’s Posts.

From 2007 to 2011, Pogue appeared on CNBC’s “Power Lunch” in a taped, three-minute comic tech review, which then appeared on The NewYorkTimes website, nytimes.com, as well as iTunes, YouTube, TiVo, and JetBlue.

In 2007, the Discovery HD and Science channels aired his six–episode series, “It’s All Geek to Me,” a how-to show about consumer technology. He hosted a PBS “NOVA” miniseries about materials science called “Making Stuff,” followed by a special about the periodic table, “Hunting the Elements.”

Pogue is a frequent speaker at educational and government conferences. He has also performed three times at TED conferences.

David has won two Emmy Awards, two Webby awards, a Loeb award in journalism, and an honorary doctorate in music. He’s been profiled on “48 Hours” and “60 Minutes.” He lives in Connecticut with his wife and three children.
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