USC School of Cinematic Arts

Spring 2016

etc ℠ ENTERTAINMENT TECHNOLOGY CENTER
Quarterly

A MESSAGE FROM THE EXECUTIVE DIRECTOR

A focal point of acitivity for ETC each Spring is the NAB Show. Our reputation as a neutral convener of media, entertainment and technology leaders makes us an ideal organizer and producer for two important conference tracks. For the third year in a row, we brought together leaders and experts in Cloud Production, producing for NAB the *Cloud Innovation Conference: Masters of the Media Cloud Lifestyle.* ETC is also building its library of videos on Cloud practices, adding more than 30 new talks from its vNAB program held in early March. Reflective of the hot topic interest in VR, a half-day Virtual Reality Summit: Expert Views on Emerging Immersive Worlds, drew a capacity crowd to hear top practitioners share insight, perspective and experience. This quarter also marked the kick-off of ETC's newest major project, a deep exploration into Data and Analytics with lots of activity planned in the months ahead.

- Kenneth Williams

INSIDE

Full House for VR at First NAB Virtual Reality Summit Produced by ETC

NAB, The Entertainment Technology Center at USC produced the half-day Virtual Reality Summit at the NAB Show and attracted capacity crowds. The summit, which kicked off with an overview provided by VR/AR Initiative Manager Phil Lelyveld, offered participants an understanding of concepts and lessons learned regarding VR production. Hands-on practitioners discussed the technical and business aspects of producing content for this emerging marketplace in sessions that focued on Live VR, The Business of VR and Audio in VR.

Fox Networks Group executive vice president of technology solutions Chris Blandy explored the challenges in producing live streaming VR with panelists DJ Roller (NextVR), Juan Santillan (Vantage.TV), Mike Davies (Fox Sports Media Group), and Jason Farkas (CNN).

On the business of VR panel, moderated by Scott Lenet, president of (Touchdown Ventures), with panelists CEO Halsey Minor (Reality Lab), Brandon Zamel, (Springbok Entertainment), and Marco DeMiroz of (The VR Fund), discussed market projections, company valuations, and business models.

A compelling panel on sound technology emphasized audio's importance to effective VR storytelling. Moderator Jacqueline Bosnjak, Q Department chief executive officer/partner, asked panelists Martin Walsh (DTS), Nicolas Tsingos, (Dolby Laboratories), Jean-Pascal Beaudoin (Headspace Studio), Jyri Huopaniemi (Nokia), and Tim Gedemer (Source Sound) about their approach to VR projects. "The thing we're all exploring is bringing depth to the timeline," said Beaudoin.
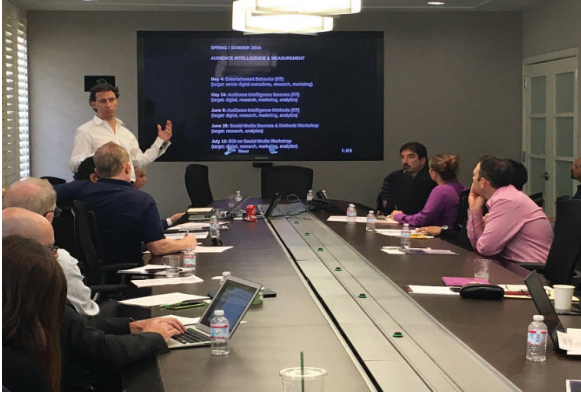
Convene

Data and Analytics Project Kicks Off At Paramount

The Inaugural meeting of the Data and Analytics Project convened at Paramount Studios on April 12. Project Director Yves Bergquist briefed ETC member representatives on the scope and goals of the project which he said intends to build "a new and critical competency in understanding the language, methods and tools of large-scale data analysis.

Bergquist also introduced members of the project's steering committee, leaders with diverse experience inside and outside media and entertainment, who will work closely and bring experience and perspective to address challenges and opportunities. The steering committee members include Shawndra Hill, PhD, a data scientist and lead researcher at Microsoft and professor at the Wharton School who researches consumer social media behavior; Randy Bean, CEO of New Vantage Partners, a leader Big Data integration for major corporations; Jessica McGlory, an integrated marketing expert, researcher at Variety, and founder of the startup Forecastr; and Ben Goertzel, PhD, chairman of the Artificial Intelligence Society, former principal scientist at DARPA/IARPA, chairman of the Artificial Brain Lab at Xiamen University, and father of the OpenCog Cognitive Framework.

To develop a concrete framework for implementing a shift toward a data-driven culture throughout the entertainment industry's value chain, the project will focus on three main areas: audience intelligence, performance measurement and processes, tools and methods. Confidential round-tables, expert workshops and technical sandboxes are planned during the next year.

NAB Cloud Innovation Conference
Masters of the Media Cloud Lifecycle

For the third straight year, ETC@USC organized the NAB Show Cloud Innovation Conference (CIC), this year's edition subtitled Masters of the Media Clound Lifecycle. In a day and a half and led by Cloud Project director Erik Weaver, broadcast, cinema, technology, hardware, software and application developers, and content creation professionals gained essential knowledge on the current status and future direction of the media cloud.

Keynote speakers included Sony DADC NMS (New Media Services) Chief Technology Officer and head of strategy Andy Shenkler, Google Vice President Eric Brewer and Elemental CEO and Co-Founder Sam Blackman.

Brewer shared his insights on ways these important challenges are addressed in the world of distributed computing and discussed how public cloud platforms have been solving for the scale and performance needs of the Media industry.

Sam Blackman spoke about helping the video industry become more efficient with on-premises, cloud and hybrid solutions. Working closely with Amazon Web Services, he describe how Elemental builds an onramp towards software defined, virtualized infrastructures.

Variety editor David Cohen led a discussion with Avid CEO/president Louis Hernandez Jr. "With Avid Media Central, we wanted to connect people," said Hernandez. "We took our standalone applications and put them where they could be shared. Now you're seeing a rapid expansion of the apps you can purchase. We have a record number of third party apps indexed on a common operating system. This is the direction that things are going."

Session topics covered cloud-based workflows, cloud-based non-linear editing (NLE), interconnect oriented architectures (IOA), software defined storage (SDS), indelible metadata, multi-cloud/container strategies, transport and ingestion, OTT and streaming, rendering and visual effects, big data and metadata, return on investment, and a new case study on the open-sourced C4 framework.

The conference was sponsored by Google, Equinix, Aspera, Stratalux and Dropbox.

To advanced technology and innovation within the entertainment industry, the ETC also provides a neutral setting for the entertainment industry, technology and to identify, discuss, test and evaluate pressing issues and proposed technology solutions.

ETC's Digital Town Square Symposium to explore the Future of Content Storage and Archiving

"Rethinking the Archive" is the next topic for the upcoming Entertainment Technology Center's Digital Town Square Symposium. The interactive forum will exam the challenges inherent in current archiving and storage practices, the pressures to change the philosophies and business practices underpinning them, and the promise of new solutions designed to meet the industry's artistics and business interests today and into the future.

The loss of the film assets from the motion picture industry's early years alerted the studio executives to the crucial importance of the archive. That importance has only grown as the number of platforms and markets multiply. Several factors have combined to create an urgent need to reexamine the definition of the archive and create best practices for dealing with the coming tsunami of rich media assets due to digital capture technologies: a steeply increased number of productions, and the lack of a storage medium, such as film, that lasts more than a few years, necesitating constant migration. The forum will look at new ways to envision the most robust and valuable archive, and new technologies on the horizon that might bring back the durability and long life celluloid.

Among the topics of focus: how and why archives are at risk; what defines the 21st century archive; defining archival pipelines from set to long-term storage; existing and emerging file formats and standards for archiving and long-term storage; and nascent technologies that promise security, durability and search. Case studies will elucidate current best practices and efforts to explore new paths.

The event will be held at Amazon in Santa Monica, on June 9, 2016.

vNAB Cloud Innovation Conference Yields 30 New Videos Now On YouTube

The Entertainment Technology Center@USC hosted its second annual vNAB Cloud Innovation Conference on March 2-3, 2016 in the Venice, California offices of Google. The 2-day extension of the April NAB Cloud Innovation Conference presented "Masters of the Media Cloud Lifecycle" with 32 Media & Entertainment (M&E) superstars, panelists and keynotes presenting TED-style talks focused on cloud-related topics designed to keep senior leaders up to date on an ever-changing world.

The 2016 conference featured keynote presentations by Netflix engineering director Vinod Viswanathan on "Media Innovation at Netflix Scale"; Mark Dickerson, VP at Technicolor on "Riding the Tidal Wave of Change: How Constellation Guided Technicolor's Journey to the Cloud"; Google Cloud Platform's Miles Ward, global head, solutions, on "How Can Public Cloud Help Broadcasters and Content Producers Reach Consumers Directly"; "Algorithmic Anthologies," by Tali Krakowsky, design partner at Prophet; and Fox EVP Chris Blandy speaking about "Migrating Fox's Media Supply Chains to the Cloud".

The program covered such critical and dynamic topics as cloud-based non-linear editing (NLE), interconnect oriented architectures (IOA), software defined storage (SDS), indelible metadata, multi-cloud/container strategies, transport and ingestion, OTT and streaming, rendering and visual effects, big data and metadata, ROI, and innovation.

ETC@USC inaugurated the vNAB program in 2015 as a "Virtual Conference" designed as both a supplement and a preview for NAB, as it makes additional insights and experiences available beyond the onsite programming at NAB.

The entire program was recorded and the presentations are now posted to ETC's YouTube channel ETCenterVideos. These recordings along with last year's vNAB Conference and Project Cloud presentations offered throughout the year contribute to a growing archive of expert information on topics of greatest importance to M&E companies navigating the transition to the cloud.

Perspective

ETC provides insight and perspective on emerging media habits of consumers and understanding of the impact of technology on the consumer experience and the creative process.

TALKING POINTS: ETC SPEAKERS ACTIVE @ INDUSTRY EVENTS

Executive Director and CEO Kenneth Williams; Program Managers Erik Weaver and Phil Lelyveld all represented ETC @USC at important industry events this quarter, sharing both their professional expertise and ETC perspective.

HPA Tech Retreat

ETC hosted " Next-Gen Cloud Workflows", a discussion about tools and production cloud implementation. ETC's Erik Weaver led the conversation. The panel featured a number of specific technologies and technologist enabling practical production work in the cloud and an example of a project that was set to understand some of the technologies and challenges. Panelists included: Erik Weaver, ETC; Jeff Greenwald, HGST; Rashid Desai, Avid; Joshua Kolden, Studio Pyxis.

March Metadata Madness

ETC's Erik Weaver moderated a panel entitled: "In the Beginning: Upstream Metadata Governance". The panel explored the concept of descriptive and technical metadata. As building blocks for production workflows continues to proliferate, how do we govern across the lifecycle and integrate pre-production metadata at the enterprise level? Coordinating a data strategy with the myriad of studio and service provider inputs will improve the overall quality of the content, but what are the essential elements to focus governance on early in the asset's lifecycle? What early data elements should be integrated into the content itself to ensure you have your best foot forward for future forms of distribution? Disney ABC Television Group, Adobe, 5th Kind were represented on the panel.

Coming up this Summer...

Audience Intelligence at the Frontier:

AI, Neuroscience & Data Revolution in Hollywood Panel Event
As part of the Entertainment Technology Center @ USC's Data and Analytics project, this panel will bring together leading data scientists, neuroscientists and senior studio executives to discuss the application of next-generation cognitive computing to the audience intelligence challenge in Hollywood.

HITS: Hollywood IT Summit

At the Hollywood IT Summit organized by The Hollywood IT Society under the aegis of the Media and Entertainment Services Alliance (MESA), Ken Williams will moderate a panel entitled: "*Fullfiling Insatiable Consumer Demand for Content: The Technology Enabler".* Technology executives will discuss how investments are being made in developing content, harness new technologies, expand internationally and drill down on operating efficiencies across all studio business units. This panel will look at how the Hollywood studios are transforming production, distribution and the viewer experience by adding a third layer of information (audio, video and now data) to all of their assets.

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The Entertainment Technology Center @ the University of Southern California (ETC) is a think tank and research center that brings together senior executives, innovators, thought leaders, and catalysts from the entertainment, consumer electronics, technology, and services industries along with the academic resources of University of SouthernCalifornia to explore and to act upon topics and issues related to the creation, distribution, and consumption of entertainment content. As an organization within the USC School of Cinematic Arts, ETC helps drive collaborative projects among its member companies and engages with next generation consumers to understand the impact of emerging technology on all aspects of the entertainment industry, especially technology development and implementation, the creative process, business models, and future trends.

For membership information,
contact Edie Meadows at emeadows@etcenter.org

Sign up for the ETC's Daily News Brief, especially compiled for the media, entertainment and technology professional: http://eepurl.com/tBFDf

Upcoming Events
*Invitation Only

Date	Event
May 17	Data & Analytics Roundtable: *Entertainment Behavior*
May 24	*Cloud Project Screening Premiere: *The Suitcase*
June 2	*ETC's Executive Board Meeting
June 9	*Digital Town Square: *Rethinking The Archive*
June 16	*ETC's All Members Meeting
June 21	Data & Analytics Project: *Audience Intelligence at the Frontier*
June 24	*ETC's Studio Technology Leaders Dinner