

Message from the Executive Director



Much to the credit of ETC project participants, the work underway here continues to build momentum and produce concrete results.

In this issue, we welcome Yves Bergquist and begin a major new effort to help the

entertainment industry unlock the potential of data and analytics.

Our VR initiative explored the business side of this emerging area in our last Digital Town Square. Our role as a neutral convener serves the industry as we gather and share best practices and advances. Project Cloud, now in its 3rd full year, has become a vibrant forum where the leaders in Cloud technology and production meet regularly. Their second short film, *The Suitcase*, is almost finished, proving another set of Cloud solutions. We hope to see many of you at NAB, where ETC is responsible for both the Cloud Innovation and VR Conferences.

--Kenneth Williams

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DATA & ANALYTICS

WHY, WHERE & HOW?

Data and Analytics Project Seeks Framework to Help Industry

The Data and Analytics Project, an ambitious new initiative within ETC that seeks to develop a concrete framework to help the entertainment industry implement data and analytics solutions throughout their production, operations and distribution cycles, is now in its planning and scheduling phase at ETC.

The Data and Analytics project is set to extend over a 12-month period, beginning with a kick-off meeting in late March or early April, 2016.

Data scientist and co-founder and CEO of the artificial intelligence engineering firm Novamente Yves Bergquist, a new addition to the ETC staff, leads the project with a high-level committee of statisticians, engineers, and industry professionals. Consistent with its role as a convener and neutral research environment, this ETC effort will focus on workshopping ETC member company's challenges regarding analytics as well as identifying actionable methodologies to deploy a data-driven culture throughout their organizations.

Bergquist has extensive experience designing machine-learning platforms to help media and entertainment clients develop deep insights into their audiences. As a strategy consultant and former business development executive for Ranker and Bottlenose, he brings a deep understanding and primary analysis of the challenges that high-velocity markets pose to large public and private organizations, along with tools and methods used to turn complexity into opportunity.

The Data and Analytics Project is expected to follow a similar protocol as ETC's Cloud initiative, where companies participate in working groups to identify common issues, set priorities and propose solutions. The common ground of the ETC environment also facilitates study and analysis of third-party solutions and emerging technology.

Cloud Project Quarterly Update Meets at Disney



The quarterly meeting of Project Cloud, held at Disney, kicked off with a tally of recent accomplishments, including the production and release of 39 video presentations, participation in more than a dozen major industry events, completion of a prototype test short film, development of a federated ID and the September 2015 release of the C4 (Cinema Content Creation Cloud) Identification System and white paper. C4 was also the topic of a brief presentation on implementation of the system and application of it within the workflow.

Security expert Ted Harrington of ISE briefed the team on security and The Cloud, covering what studios and vendors need to consider when adopting cloud solutions.

Information security consultant Mark Zorn briefed attendees on security and future ETC efforts involving federated IDs. The question of Object Storage was the topic of Daystrom's principal architect Paul Evans presentation and Chris Chen and Doug Reinart described WRAST, a worldwide repository for asset storage and transport.

If ETC's first short, *Luna*, was designed to figure out what doesn't work in the Cloud, the new short, *The Suitcase*, again directed by USC MFA candidate Abi Corbin, is determined to prove what does. Its goals include next generation workflow, use of the C4 Framework, metadata, high dynamic range and 360 camera capture. As part of the update presentation Kaki Ettinger of Disney shared details of a metadata test case mapped to a structured ontology.

ETC enjoys a long-standing history as a neutral think tank and research center within USC's School of Cinematic Arts that convenes executives, innovators, thought leaders and catalysts. Part of the ETC mission is to convene industry peer groups and partners to share knowledge and experience.



vNAB Cloud Innovation Conference Features 32 M&E Superstars

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 Blandly 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 NAB Cloud Innovation Conference takes place at the NAB Show in Las Vegas, April 19 & 20, 2016.

The entire program was recorded and the presentations will be 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.

Explore

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

SC Virtual Reality Club Advisors Meet @ ETC

VRSC, the University of Southern California's organization established as the "hub of students, staff and faculty interested in Virtual Reality" held its first faculty advisor meeting at ETC on November 13.



The organization, which was just founded in 2015, brings together students and faculty from all over campus to explore virtual reality technology,

production and development. The club is growing rapidly, with nearly 700 members.

To keep pace and engage in this rapidly evolving field, VRSC plans workshops, crash courses, a virtual reality film festival and various VR hackathons for students to get involved with VR projects and labs on campus.

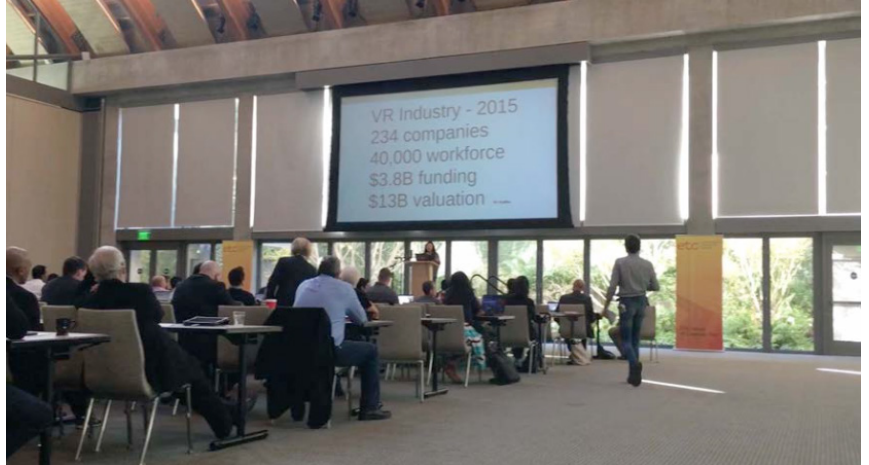


ETC Organizes Virtual Reality Track for NAB

ETC is the organizer of a half-day Virtual Reality Summit at NAB on April 20 in Las Vegas.

The 4-session afternoon program is designed to bring NAB attendees current on key concepts and lessons learned regarding VR production. Hands-on practitioners will discuss the technical and business aspects of producing content in this emerging marketplace. Topics include live streaming, the business of VR, and VR audio.

Business of VR Event Draws Over 100 Leaders to Explore Business Frontier



One hundred and four business people with direct involvement in Virtual Reality attended The Business of VR workshop co-produced by the Entertainment Technology Center at USC and the Advanced Imaging Society. Over the course of the afternoon the attendees heard seven 10-minute presentations, participated in one of four moderated discussion groups, and had the opportunity to experience seven VR demos while networking. The event was held at the Skirball Center, Los Angeles, on November 17, 2015.

The program provided attendees with perspective, discussion and experiences beginning with seven 10-minute presentations from Jeffrey Greller, Digital Agent with a Focus on VR at WME|IMG, Seth Shapiro, Principal, New Amsterdam Media, Adjunct Prof., USC School of Cinematic Arts, and Governor, Interactive Media Peer Group, the Television Academy; Brian Furano, Director of River Studios, Venture Advisor for VR focused Rothenberg Ventures; Eunice Shin, Director, Manatt Digital Media; Anthony Borquez, Founder and CEO of Grab Games, Clifton Dawson, CEO, Greenlight VR, a VR-focused market research company, and Schuyler Moore, Partner, Stroock & Stroock & Lavan.

While the majority of the presentations focused on content and platforms, Moore delivered a provocative array of potential legal issues that few in the audience had heretofore considered.

Following the meeting, VR and AR Initiative Leader Phil Lelyveld published a comprehensive summary of the presentations and group discussions that explored location-based entertainment, platforms and money, content and money, and big picture strategy. The report is available at Etcenter.org/business-of-VR/.

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.

ETC Reports on CES 2016

ETC covered CES with a focus on those areas that directly or indirectly impact entertainment and the interests of ETC members. Coverage began in December with 3 weeks of advance stories and continued throughout the show with twice-daily news briefs on new product announcements, keynote presentations, evolving industry trends and individual demonstrations. ETC distilled the record 2.4 million net square feet of exhibit space that housed 4,000 exhibitors who introduced 20,000 new products into a 50-page report that highlights the key trends and categories that emerged during CES 2016. This year, ETC also conducted on-site executive briefings that added further context and perspective. Both the report and a video recording of the presentation can be found online at <http://www.etccentric.org/ces>.



AMIA/DAS

Erik Weaver, Project Cloud lead, delivered the opening keynote remarks at the Digital Asset Symposium (DAS) at AMIA 2015. AMIA is a nonprofit international association dedicated to the preservation and use of moving image media. The Conference is the largest gathering of motion picture and recorded sound archivists and interested professionals.

HPA Retreat

ETC's Erik Weaver and technology journalist Debra Kaufman both moderated HPA Tech Retreat panels. Weaver led the discussion on tools and production cloud implementation. Kaufman, who regularly writes for ETC's Daily News Brief, was joined by ETC's Phil Lelyveld and others for a look at opportunities and obstacles in producing Virtual Reality.

NAB Futures

Phil Lelyveld, VR & AR Initiative lead, addressed The NAB Futures Summit on the importance of Virtual and Augmented Reality. The NAB Futures Summit brings high-level and business oriented panels and presentations to broadcasters showing how developments in technology are shaping consumer attitudes and offering new revenue opportunities.



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 Southern California 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@etccenter.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

March 24	All-Members Meeting at ETC
March/April TBD	Data & Analytics Kick-Off
April 19 & 20	NAB Cloud Innovation Conference
April 20	NAB VR Summit (NAB)
Early May	Digital Town Square on Storage & Archiving
June 24	Studio Technology Leaders Dinner