USC School
of Cinematic Arts

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CENTER

QUARTERLY

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FROM THE
EXECUTIVE DIRECTOR

While the International CES consumes the first days of the New Year, it also helps to frame many of the other projects underway at the Entertainment Technology Center @ USC. We condensed 2 million square feet of exhibits and hundreds of hours of panels and presentations into a concise 26 pages of easy reference. In February, we expand our industry event coverage with the HPA Retreat and then live reports from NAB, where we are responsible for the Media Management in the Cloud Conference Track. In our role as conveners and explorers, we hosted an extensive briefing on OpenStack and attended the forward facing CineGrid. Details and more are in this edition.

- Kenneth Williams

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ETC TO LEAD CLOUD PROGRAM AT UPCOMING NAB CONFERENCE

Media Management in the Cloud: Advances in Content Reliability and Security is a two-day senior management overview organized by the ETC@USC in partnership with NAB to explore how cloud-based solutions impact each stage of the content distribution chain, including production, delivery and storage.

Organized by Erik Weaver, Lead of the Production in the Cloud project at ETC, the NAB track will demonstrate the increasing reliability, security and economic viability of the latest cloud-based innovations and solutions. Experts from each link of the creative content chain will provide an overview on interdepartmental and interdisciplinary collaboration during pre-production, production, post-production, formatting, interim storage, multiplatform delivery, viewership measurement and big data analytics.

Session topics include:
- An Update on Cloud Industry Topics
- Content and The Cloud: Transport
- Content Creation in the Cloud: Post-Production
- The Next Generation Cloud
- Cloud Concerns: Reliability and Security
- Business and the Cloud: ROI and Metadata
- Cloud Delivery
- Case Studies

Confirmed speakers and panelists include executives from Amazon, YouTube/Google, IBM, Aspera, Sony, Adobe Systems, Sundance Institute, Avid, Akamai, Sohonet, CineGrid, Box, The MPAA and major studios. Variety's David Cohen host a special guest and audience Q&A.

For more information, please visit the conference website.

The ETC will also be reporting from NAB. Look for daily posts and a wrap-up report.

PERSPECTIVES

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.

CLOUD PROJECT UPDATE
ROI Key Topic of November Meeting

**NAB Conference Track to Replace
Next Quarterly Update Session**

Project Cloud's working groups gathered at Warner Bros. in November and produced tangible results of their discussions.

The teams presented project plans, many that correlated business benefits and defined ROI. One key finding common across several groups and confirmed by other attendees: some ROI is represented by savings in cost and time rather than revenue increases.

The last meeting also illustrated the progression of Project Cloud since the launch of its original model -- a collaborative effort to identify and address critical issues related to the production in the cloud effort -- to the establishment of actual projects. For example, following up on the Transport & Framework team's earlier recommendation to create a global system for media assets that would include a tracking system particularly helpful in serving remote and unique locations, is the completed installation of a 10Gb connection between Sohonet and ETC for testing purposes.

In addition to the working groups, Project Cloud holds at least one general interest meeting each month covering a range of cloud-related topics.

With many project members expected to be at the upcoming NAB Conference and Project Cloud responsible for convening the NAB Cloud Program, the two-day conference will replace the regularly scheduled quarterly update.

CES: Covering Top Trends, Products and Technology
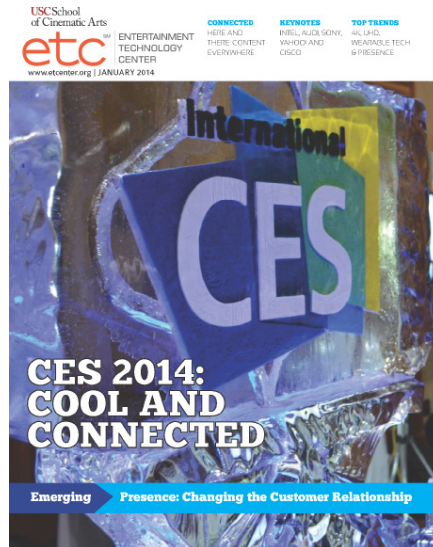
The ETC@USC tracked the most interesting and breaking entertainment technology news coming out of the 2014 Internatonal CES this January 5-10. Our team, which included veteran journalists Carolyn Giardina, Debra Kaufman and Paula Parisi in addition to ETC staff and consultants, reported on new product announcements, keynote presentations, evolving industry trends and individual demonstrations. ETC also prepared and led tours of the Central Hall show floor, a service that we plan to expand for CES 2015.

ETC's complete analysis of the show appears in a 26-page report that was provided to ETC Platinum, Gold and Silver members.

CES planning began in the early Fall with published coverage first appearing with an early preshow report posted before Thanksgiving and included in the last edition of the ETC Quarterly.

Of the forecasted trends published in a series of posts in advance of the show, all were evident in Las Vegas with 4K and UHD, Wearable Tech and Personal Data, Connected Content, and The Internet of Things most prominent.

One trend, Cloud Services, appeared less as a discrete category than a nearly ubiquitous element of the media landscape. Nearly every CE manufacturer, both premium and value, announced partnerships with various content carriers including Netflix, Hulu, M-Go and Roku. Smarter, more refined discovery and recommendation technologies calibrated to the individual are among the features announced in the latest generation of televisions and services, many built on Android, iOS and, in the case of LG, webOS. Both consumer data and the metadata associated with the content are vital to these technologies. Increasing dependence on a Cloud infrastructure appear evident.

In total during CES, ETC published two daily editions of its daily news brief with more than 105 original posts and links to another 124 noteworthy articles. Additional coverage included a Flickr stream of original photography and a consolidated slide presentation.

EXPLORE

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

ETC Hosts: OpenStack - Why It's Important and How It Can Save Money

The ETC@USC kicked off the first of a series of briefings on OpenStack, with a session focued on cost, scale and stability. Founded by Rackspace Hosting and NASA, OpenStack has grown to be a global software community of developers collaborating on a standard and massively scalable open source cloud operating system. The mission is to enable any organization to create and offer cloud-computing services running on standard hardware. **The next ETC OpenStack event, "Eventually OpenStack for M&E," is set for March 17, 2014.**

CONVENE

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.

Intel's Jeff Demain Discusses Future at December Mega Session

Jeff Demain, Silicon Photonics Operation's Business Director for Intel, explored near-future developments in entertainment technology. His role at Intel engages him with external partners and the Industry to drive the business success of transformative optical/laser technology. Foreshadowing some of what the ETC would see a month later at CES, Jeff addressed the future of cars, going beyond self-driving vehicles to the concept of the outside surface of the car itself being a display screen. He also spoke about the Internet of Things, where chips can be deployed to monitor everything from plant growth to individual organ functions in the human body - creating new markets for Intel processors.

ETC Represented at CineGrid International Workshop

CineGrid, a non-profit international membership organization focused on "extreme" digital media, hosted its annual workshop in December at Qualcomm's San Diego headquarters. The ETC@ USC participated in the 3 days of interdisciplinary workshops and demonstrations that identified new avenues of research on digital media. Among the topics: digital workflows, next-generation display technology, real-time collaboration, image compression, media transport, networking, storage, camera arrays and using digital media to enhance art, culture and education. Although CineGrid has always placed an emphasis on working with the media and entertainment industry, its membership also includes a large number of university researchers who have benefited from their collaboration with CineGrid by leveraging higher-resolution imagery, better sound and more secure and efficient distribution of digital media for data visualization, simulations and other research-driven endeavors.

Organized and operated by Laurin Herr and Natalie Van Osdol of Pacific Interface, this year's keynote speakers included Alex McDowell, founding director of the 5D|Global Studio at the University of Southern California's Cinematic Arts program, who spoke about collaboration and prototyping for "a new narrative"; and Bill Feightner, CTO of Colorfront, a software development company for the motion picture industry, who addressed current opportunities and challenges of networked digital motion picture production and post-production. SCA Professor and Charles Swartz Chair, Richard Weinberg, demonstrated microscopic imagery of crystalline formations on the QI Vroom display.

Sean Roberts, a current OpenStack Board Director and an executive who works extensively with OpenStack and Software Defined Infrastructure at Yahoo!, addressed "OpenStack for the Media Storage in the Cloud" and presented background on the ETC work.

In additon to greater awareness, the ETC@USC also drew an invitation to present on Production in the Cloud at CineGrid Brazil in September 2014.

UPCOMING EVENTS

February 27th	Digital Town Square
March 6th	Mega Session
March 25th	MESA - March MetaData Madness - Luxe Hotel
April 5th - 10th	NAB - Las Vegas (Daily Coverage from Show)
April 8th & 9th	Media Management in the Cloud - NAB
May 13th	Studio Technology Leaders Dinner