

The
NOW
WHAT
Issue

*A new remote-work reality will
mean long-term changes for how
M&E gets business done.
Welcome to Hollywood's
new normal. P. 15*

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Getting Creative with Work-from-Home Technology



Remote work presents distinct challenges for content creators in the entertainment industry. Here are the key factors for making it work.

Abstract: In the blink of an eye, M&E companies, like many organizations worldwide, are facing very urgent challenges of secure connectivity and enabling working remotely. Increased requirements loom for huge bandwidth, enormous compute power and extreme fidelity, all while maintaining maximum creativity. Content creators are in need of tools to maintain production progress and collaboration among team members and suppliers on multiple platforms with ease and confidence.

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Businesses around the world are getting a crash course in distributed work-force management during the COVID-19 pandemic. While the trends toward remote work and cloud computing were already growing, this crisis has created a new urgency for companies to ensure they have the tools and processes to enable productivity and collaboration across platforms and locations.

For the M&E industry, requirements for high bandwidth, enormous compute power, extreme fidelity and team creativity add to the usual challenges of remote work. At the same time, the continuity of our M&E channels is more important than ever as they play a vital role in keeping people entertained, connected and informed.

The industry's unique computing needs

As in other industries, entertainment companies have been extending production toolsets to remote sites through the cloud to maximize global collaboration, increase talent access and reduce the need for capital expenditures for on-premises technical

infrastructure. But unlike typical office environments, where remote collaboration might require no more than sharing documents or attending online meetings, studio work requires powerful workstations, complex file systems, dynamic workflows and a high degree of in-person collaboration. Production tasks are highly interactive, whether they involve editing, adding special effects or making sure a shot looks right and everything is in sync. Historically, this has required studios to maintain artists, resources and computing power on campus.

Factors for success

To address the growing need for global collaboration as well as recent work-at-home requirements, DXC Technology is helping entertainment companies transform their processes and technologies to effortlessly connect artists to the data and resources they need regardless of their location. For example, we've helped a major animation studio with connectivity techniques and capabilities to bridge production resources on- and off-premises, extend key toolsets to remote sites and help the workforce via distributed workflows.

In our work with entertainment companies, we've identified several key components for enabling remote work in the industry, including hardware, effective workflow toolsets and high-performance, secure communications.

On the hardware side, creative employees typically have huge workstations that most people wouldn't have at home. Studio employees are now using their home machines and peripherals to remotely access these high-end workstations. Remote access introduces a certain amount of lag or loss of fidelity for color matching, pixel matching and audio synchronization, but production workers are largely able to get their jobs done, and only a few people must return to the campus for work.

To address some of these issues with performance and fidelity, and give the artist a better desktide experience, DXC is

Content Technology Tomorrow . . . Can You See It?



The media industry has long looked to create a "content creation on demand" culture, based on leveraging global talent. Until recently, this had been a gradual transition, driven primarily by the industry's need to better access talent, meet the growing need for content, hit deadlines and manage costs.

However, COVID-19 has driven many professionals – and the overwhelming majority of content creation experts – to work from home. That, in turn, has dramatically increased the media industry's urgency for moving to a content creation on-demand model. It's become the rule, not the exception. Instead of making this transition over the next several years, the COVID-19 challenge means media companies will need to accomplish this in a much shorter time frame.

COVID-19 has pushed two critical market forces in opposite directions: While the ongoing situation has pushed technology capabilities forward to help people work remotely, it's also put the brakes on demand and associated revenue. In-field movie and production crews were put on hiatus, and scripted/unscripted TV and movie production along with post-production activities are frozen, significantly slowing down the content creation pipeline.

In this new world, the new norm must become: content creation, management and distribution on a global scale, with talent, workflow and teaming supported by access, applications, compute, storage and security.

Movies and music show the way

The movie and music businesses have paved the way forward. Animators, musicians and music producers don't have to live in Los Angeles or New York



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helping companies adopt and integrate industry-leading protocols and products that provide high-performance remote access for power users with graphics-intensive applications. Companies need tools that can not only support multiplatform, hybrid environments, but also enhance performance and provide robust security for the data being transferred. The aim is to give users fast response times and high image quality for editing and other tasks.

We're doing analysis and integration of these products and working with the vendors to enhance them for studios' specific needs, for example, supporting specialized peripherals like hardware tablets that let users draw, move artifacts and change colors at the pixel level.

Another key issue is workflow. Content must go through a series of steps before it is ready for production, and each workflow has unique demands that need to be tuned with these remote hosting agents to optimize effectiveness. We've developed models for doing that and templates to use as a starting point. For example, we've worked with multiple studios on developing digital content pipelines — sets of digital animation tools and infrastructure that support artists' workflows end-to-end. Companies that have been implementing these solutions have a leg up on the competition in their ability to adapt to crises like the one we're currently experiencing.

Future evolution

The entertainment and technology industries are both evolving rapidly, so new solutions will continue to emerge that enhance remote teams' effectiveness and accelerate collaboration. Companies will increase their use of analytics, process management and cloud-native technologies to increase availability of digital resources and maximize artists' time. We can expect to see more rapid development of technologies and work models as the current situation leads companies to innovate in their use of distributed workforces. ■

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any more. And if a studio can access talent using people from Europe, South America or Asia, all the better. As technology extends our work environments, companies will be in a much stronger position to hire the best people for the job, wherever they may live. The digital world has not only affected the video and theatrical sector, but also the music business. Studio musicians around Los Angeles or New York made a good living just a few short years ago, but now much of that work has been outsourced. Today, many musicians work from home and use file-sharing programs to drop the samples producers need to complete a music track or video clip. Whether just around the corner from Capitol Records in Los Angeles, or 7,500 miles away in the Middle East, studio techs can receive and process files in the same amount of time.

From a technology point of view, some important advancements have emerged that will help drive and accelerate the transition to a work-from-home culture. For starters, we have seen the maturity of virtualization and network technology and the continued movement of software to an integrated ecosystem of tools and capabilities.

The cloud has also played a big role. People in the movie and music industries used to work with as many as a dozen software programs that were individually purchased or custom built and loaded onto their workstation. No longer. More and more, these apps are integrated into a joint workflow with a dashboard and with proper access and security. Instead of having to buy new servers to launch a project, Amazon Web Services, Microsoft Azure, Google Cloud, BeBop Technology and other key industry providers make it possible to access compute and storage, ramping up or scaling down as needed.

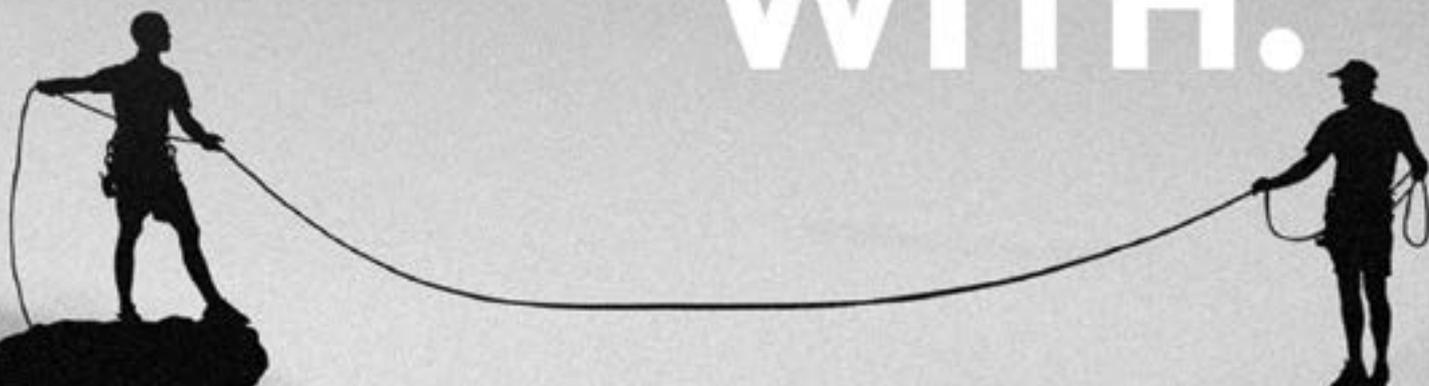
The major cloud providers are making major impacts in the media content industry. As we speak, they are funding proof-of-concept initiatives, working with content industry think tanks and competing for this future growth industry. In addition, the use of software containers and the integration of smaller point solutions are being consolidated into a consortium of services that will be selected and deployed on demand.

Although we all are in this uncharted COVID-19 version of a new reality, we can draw upon history to know that society will survive and even find ways to thrive in the face of unknown challenges. The resiliency of the people behind the M&E industries, will inspire new creative experiences for the stay-at-home generation, helping us get through this moment.

Once on the other side, we will come out of it with a brighter, faster and more exciting future, thanks to the agile vision of a remote global talent workforce enabled by advancing technology. In the end, the rollout of a decade-long content technology roadmap has officially been condensed into a matter of months.

Can you see the future? It's closer than ever.

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NOT JUST
WHERE YOU'RE
GOING,
BUT WHO YOU GO
WITH.



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