

**M+E**

**JOURNAL**

# Risks & Rewards



The opportunities before media and entertainment are unprecedented. So too are the threats.

## **OUR CHANGING INDUSTRY**

The roadmap to media and entertainment's future is paved with innovation

## **LOCALIZATION**

Content localization is a worldwide, need-it-now business. Here's how to keep pace

## **WORKFLOWS AND THE CLOUD**

Cloud workflows are proving crucial for media productions today

## **SMART CONTENT**

It's a data-driven content reality, and all the tools are there to realize success

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# THE FUTURE OF MEDIA PRODUCTION: FASTER, CHEAPER, AND MORE SECURE

Realizing the vision to bring workflows to your content



**ABSTRACT:** Today, M&E companies leverage technology solutions to unleash themselves from traditional frameworks and content silos — helping creative teams work faster and more collaboratively. As tools increase, defining workflows that emphasize security as much as convenience are critical. Tomorrow’s workflows must combine a Least Privilege Access model with a Least Locations model to facilitate security and integration while simultaneously increasing workflow efficiency.

**By David Rosen, VP, Cloud Applications, Solutions, Sony Electronics Professional Solutions of America**

M&E companies leverage disconnected technology solutions to help creative teams work faster and more collaboratively. As the number of tools increase, defining workflows that emphasize security as much as convenience is critical. Tomorrow’s workflows must combine a Least Privilege Access model with a Least Locations Storage model to facilitate security and integration while simultaneously increasing workflow efficiency.

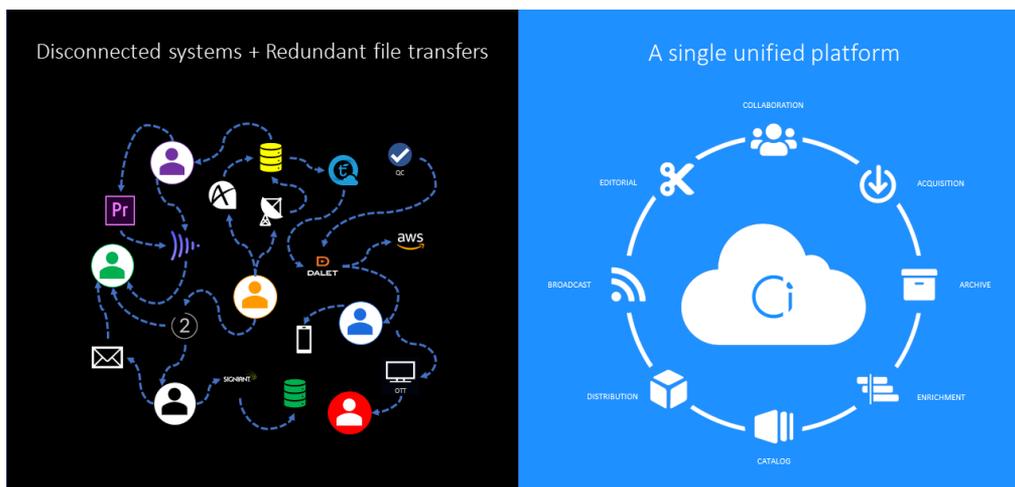
## THE EVOLUTION OF REMOTE WORKFLOWS

Remote workflow is here to stay. The trend towards remote content production started well before the pandemic. However, the pandemic accelerated the trend and forced it to expand to all aspects of the media life cycle. Even work that was being done in the same city shifted to remote as work-from-home took hold and meeting in person was limited.

This rush to remote workflow was accomplished by making as many copies of the content as necessary and sending them wherever the creative talent happened to be. While this allowed remote work to proceed, it was less than ideal. Large file transfers can take hours or days to complete — costing the production valuable time. Copied content requires redundant storage and additional bandwidth to be purchased which costs the production more money. More concerning is the fact that every storage location becomes an additional threat vector that needs to be protected and managed.

Remote workflow needs to evolve to a “Least Locations” model where rather than moving content to each process, the process

## WORKFLOWS BEFORE AND AFTER



*A visualization of workflows before and after a unified platform approach.*

moves to where the content is stored. In the same way that the Least Privilege Access model is used in software and supply chains to minimize risk exposure, the least locations model must be used in remote workflow to minimize the expanding risk of storing content in multiple locations. This is imperative for three business-critical reasons: improving security, decreasing costs, and increasing speed.

The core tenet of the least locations model is to minimize copies and maximize access. As a result, storage costs are reduced, time lost to file transfers is regained, and security can be consistently applied and tightly focused.

### A NEED FOR CLOUD-NATIVE MULTI-FUNCTIONAL SOLUTIONS

The cloud provides an ideal foundation to build scalable solutions that adhere to the least locations model and vendors have begun to offer cloud-based SaaS solutions which take advantage of that. However, most vendors offer a single function such as transcoding, file transfer, or collaboration, and, as a result, production teams must still move content from service to service. What is needed is a solution that provides multiple post-production services while at the same time allows secure and centralized access to other additional service providers.

Sony's Ci Media Cloud is such a solution. Built on top of AWS, Ci is a SaaS solution that offers five

key services that every production needs: high-speed transfer, live real-time collaboration, asset management, transcoding, and archive. All of these services use the same shared storage, meaning no additional copies are required. And since Ci can integrate with the production's AWS S3 bucket, the production can authorize multiple vendors or solutions to access it. Alternatively, Ci can programmatically provide access to other applications. This approach provides the additional benefit of ensuring all content interactions are centrally logged across all applications for audit purposes.

### LEAST LOCATIONS MODEL IN VFX WORKFLOWS

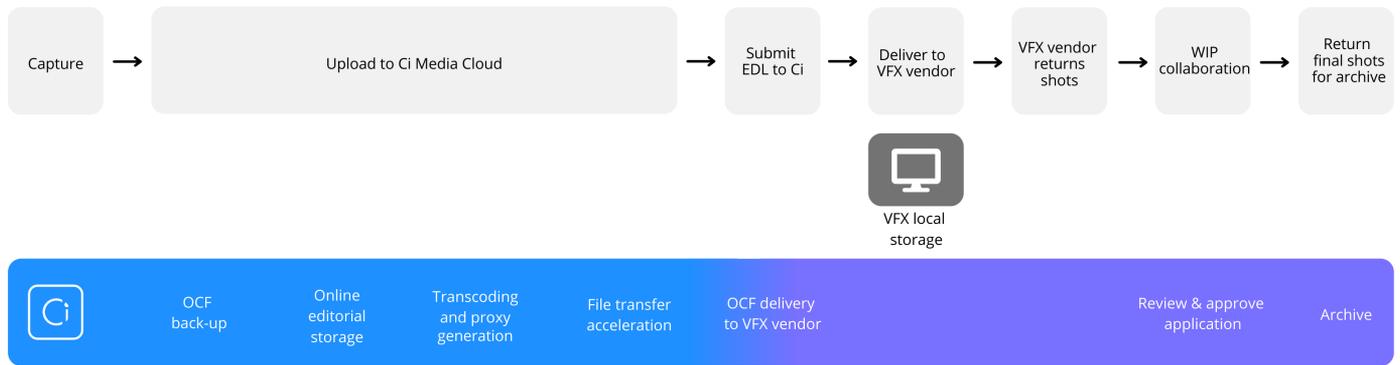
The VFX workflow provides an excellent example of how the least locations model can be employed to not only improve security and reduce costs but also to dramatically improve speed and efficiency. To highlight that, let's look at the traditional VFX workflow and then compare that to an alternative using Sony's Ci Media Cloud.

After capture, content is backed up on hard drives, copied to online editorial storage, and backed up to LTO. Content is then stored in a temporary file transfer location to be delivered and stored at the VFX company. When work is ready to be reviewed, cuts are uploaded and stored in yet another collaborative review application and repeated until a final version is approved. Once approved, final files are transferred



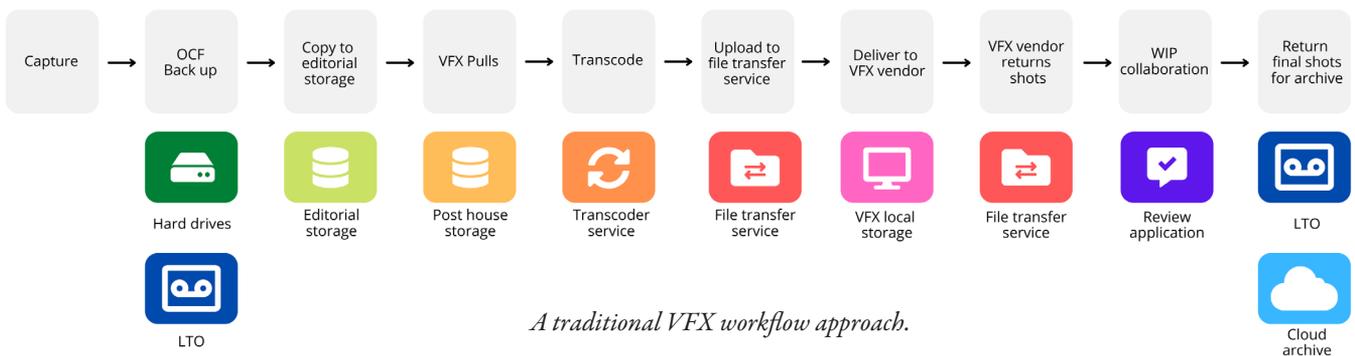
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## VFX WORKFLOWS WITH CI



*A VFX workflow with Sony Ci.*

## TRADITIONAL VFX



*A traditional VFX workflow approach.*

from the VFX vendor to the production company. That is a lot of file transfers and storage that need to be paid for and protected. The VFX pull workflow has room to benefit from the least locations model.

Sony’s Ci Media Cloud has added functionality that allows that same VFX workflow to happen with 80 percent fewer storage locations while making the entire process faster and more secure.

Rather than backing up Original Camera Files (OCF) to LTO, they can be uploaded directly to Ci and stored in the production’s bucket. Once safely backed up, Ci creates preview proxies so that the content can be securely viewed from anywhere. When an editor needs to pull shots and deliver frames to the VFX vendor they can simply submit an edit decision list (EDL) to Ci to initiate the workflow. Ci locates the referenced OCF that was previously backed up, converts the referenced clips into the desired output format, and dynamically provisions access to just those frames directly to the VFX vendor and notifies them when delivery is complete. The VFX vendor can then assign specific shots to specific artists.

All of this happens without leaving Ci and with the content stored in a single, secure location. When it is time to review the VFX shots that have been created,

they are uploaded back to Ci where the built-in video review tool is used for real-time playback, commenting, and annotation. This ensures that the original content and the created content reside in the same storage location — making the eventual handoff to the archive team very simple.

### A LOOK AHEAD

This use of the least locations model is a significant step in the right direction, however, there is more work to be done. Different applications require storage with different performance characteristics. For example, online editing requires incredibly fast storage while archive storage can be slower. Until this changes, there will need to be multiple copies. In addition, productions may consume services from different public clouds necessitating at least one copy in each cloud.

The goal of the least locations model is to minimize copies and maximize access while working within current technological constraints. As more software vendors move to cloud-native architectures they must keep this as a foundational tenet and treat seamless interoperability and workflow efficiency as first-class product features. ■