



➤ DISCOVERY COMMUNICATIONS

Every year, Discovery contracts with more than 600 production partners to create thousands of hours of video content for its popular non-fiction media brands, including Discovery Channel, TLC, and Animal Planet.

The variety of producers and the assets they create varies from program to program. “Some produce 400 hours of video across several series, some may just deliver one-off specials, and there’s plenty of people who are doing 10 to 20 hours a year that might have a single series with us,” says Josh Derby, VP of Technology Development & Strategy for Discovery Communications.

Likewise, assets include everything from finished programs to individual graphic elements with components in between such as program extensions, clean or “textless” scenes Discovery can use for international re-versioning, as well as alternate talent or alternate network versions. In all, there are 30 types of media deliverables that producers can include, according to Derby, that add up to “multiple thousands of file deliverables in the course of a year. And most of our files are 40 to 60 gigabytes for a program package.”

Multiple Delivery Syndrome

Those quantities are a lot for producers to manage, and a lot for Discovery's quality control teams to check into the system individually so they can get to their "real job" of actually viewing the materials for quality acceptance.

But it's not impossible. In fact, Discovery already has a process in place that's been applied uniformly across its networks to make submitting the finished programs, and all associated media files, consistent and easy for QC to check in.

"We built automated processing around the submission process," says Derby. Once a data tape containing new program material is received by the quality control team, "it's all pushbutton automation, scripts, and everything's going where it's supposed to." But that doesn't help the producers get it right before they send it.

The problem? First, it requires the producers, whom Discovery engages for their production expertise, to become file delivery experts as well. They have to make specific choices and set parameters to write the program to LTO tapes, which provides no room for formatting errors. They also have to — often in the rush to meet tight deadlines — manually type in precise metadata information that can't be off by even a single character, digit, hyphen or space; a mistake that wouldn't be caught until the automated QC process rejects it.

Get either of those wrong before shipping it overnight to Discovery, and it would have to be shipped back to the producer for fixing.

The physical tape method also poses a second problem: when a program takes overnight to ship, a producer doesn't know its status, possibly for days. It can even take two or three times longer (and costs two or three times more) if Discovery needs to ship it back to the producer to fix the errors...two or three times.

"Because of our global footprint, we're always looking for ways to get programs around the world faster," says Derby. "Repeated delays introduced at this critical point in the supply chain — between completion of production and entry into Discovery's system — are no longer acceptable."



PROBLEM:

- Producers held the burden of manually entering metadata information and ensuring there were no errors
- Sending physical tapes risked having to double or triple the time and cost if the tape had errors and needed to be shipped back to producers

SOLUTION:

Media Shuttle - the easiest and most reliable way to send any size file, anywhere, fast.

BENEFITS:

- Manual entry of metadata was nearly eliminated, and producers could correct any errors in real time
- Delivery was immediate and producers were able to view a status page to be aware of the delivery and acceptance of their materials
- Each asset transferred is tied in with the rest of workflow automation so the receiving systems can initiate their workflows automatically upon check-in.

A Mandate for Change

Discovery Communications was early to recognize how the power of cloud technology could be harnessed to enable the massive changes taking place in the Media & Entertainment industry. In 2015, Discovery's technology leadership laid out a transformational vision for the company to move aggressively toward the public cloud. In addition to the upstream video supply chain, the company had several areas it wanted to innovate by moving infrastructure to the cloud. Embracing the cloud across the entire organization, says Derby, would help Discovery take advantage of the scalability, global availability and inherent robustness of emerging cloud models.

One significant area of leverage involves getting completed programs much more quickly through processes such as language versioning, customization and VOD prep and distribution—all activities that currently take place one after the other. Doing them in parallel in the cloud “decreases time to market and makes everything more efficient,” Derby says.

Getting the programs into the cloud to begin with was the critical first step, and for this to be successful, Derby knew his team would need to do three things:

- Eliminate the delays and inefficiencies of getting media assets into the system with data tape;
- Retain the highly effective metadata model to automate cloud processes once checked in;
- Keep producers aware of errors, delivery and acceptance status so they could act immediately.

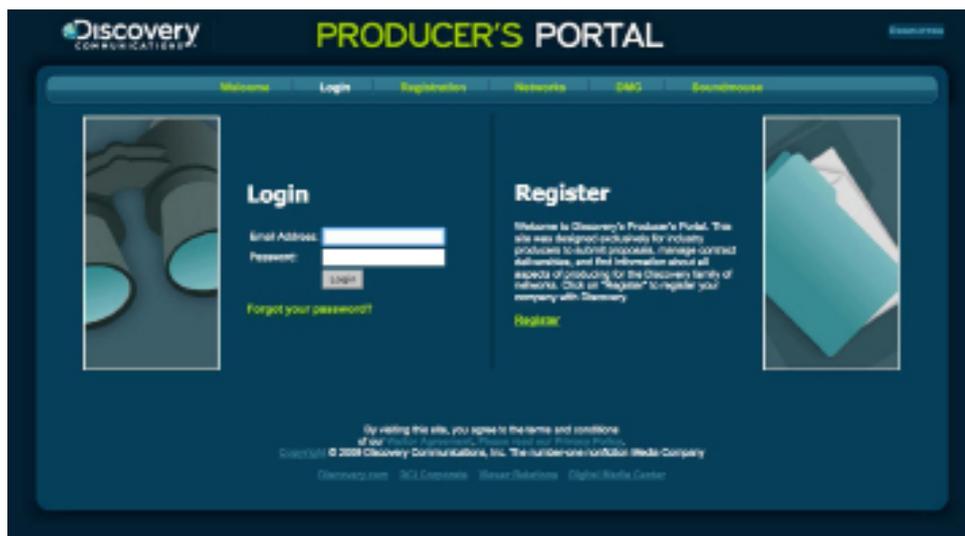
“Signiant was the first place we turned,” says Derby. Discovery has long relied upon the company's various on-premises software and Software-as-a-Service solutions to move media assets around the world. For fast file transfer into the cloud, Signiant was the logical choice.

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JOSH DERBY

Moving Large Video Files to the Cloud — Fast

Discovery saw what Signiant was doing with Flight, a SaaS offering that provides high-speed cloud uploads for large files over standard internet connections. With an auto-scaling, loadbalanced cloud infrastructure managed by Signiant, Flight is a breakthrough solution for companies like Discovery that understand the power of cloud-native implementations.



Discovery's Global Technology and Operations team quickly zeroed in on the Web Transfer API variant of Flight, which allows developers to embed accelerated file transfer into their own Web application. Discovery had already built a Web interface called the Producer's Portal and planned to extend its functionality to include submission of finished content directly to the cloud. By incorporating Signiant's Web Transfer API into this application, Discovery's developers gave producers the ability to easily initiate high-speed transfers of show materials from a local computer to Discovery's virtual private cloud in the Amazon Web Services platform.

As Discovery's existing online system for communicating with producers about their deals, program assignments and proposals, the Producer's Portal was an interface they already knew. "It wasn't that hard to have them start thinking about it as their one-stop dashboard for delivering everything they needed to deliver to Discovery, including media assets," Derby says. This made the new workflow as intuitive and easy to learn as any consumer file sharing service.

For producers, manual text entry is no longer necessary at all on most metadata fields. On others, it's not possible for producers to proceed with errors, so they can fix mistakes in real time, instead of after a few days of round-trip shipping. A status page shows the progress of all the transfers that are ongoing during the producer's upload session, so production partners are now always aware of the delivery and acceptance of their materials. And delivery takes place immediately, with the push of an upload button.

Simple for producers, yes. But it's the file handling under the covers that makes the difference, robustly linking metadata entered on each asset to tie it in with the rest of workflow automation. Specific file information is now actively communicated to other cloud-connected processes, so the systems that are expecting the asset in their queues can initiate their workflows automatically upon check-in — thereby activating the parallel cloud workflow that Discovery's technology leaders envisioned.

Ramping Up Success

The company recently began the new portal's rollout, transitioning producers to the cloud workflow that will eliminate the delays of shipping physical media — plus the inevitable doovers to correct problems on the tape, followed by more round-trips of overnight deliveries. Production partners will merely see the delivery experience as a new feature on the Producer's Portal. But behind the scenes, Signiant technology is working to ensure fast, reliable, and secure delivery of media assets to object storage in the cloud. The entire submission process is now reduced to "two and a half hours, already checked into the MAM, while in that time, it's been through two automated quality checks and four transcodes," Derby says — ready for the QC technician to start watching. "Having the Transfer API available for us to build the application we wanted made that possible."

BY INCORPORATING
SIGNIANT'S WEB TRANSFER
API INTO THIS APPLICATION,
DISCOVERY'S DEVELOPERS
GAVE PRODUCERS THE
ABILITY TO EASILY INITIATE
HIGH-SPEED TRANSFERS
OF SHOW MATERIALS FROM
A LOCAL COMPUTER TO
DISCOVERY'S VIRTUAL
PRIVATE CLOUD IN THE
AMAZON WEB SERVICES
PLATFORM — IN A MATTER
OF MINUTES

ABOUT SIGNIANT



Signiant's enterprise software provides the world's top content creators and distributors with fast, reliable, secure access to large media files, regardless of physical storage type or location. By enabling authorized people and processes to seamlessly exchange valuable content – within and between enterprises – Signiant connects the global media supply chain. **Find out more at www.signiant.com.**

