Tsecond's BRYCK® Platform improves dailies management media workflow efficiency for Picture Shop

T|SECOND

Picture SHOP
PART OF STREAMLAND MEDIA

| Enables parallel dailies management workflows along with data ingestion, reducing overall processing time by 50%.

| Reduces operator time spent on rote tasks, resulting in improved quality and significant cost savings.

| Improves collaboration and workflow efficiency by optimizing access to large image media files.

Dailies Workflow

In cinema and television production, "dailies" or "rushes" review is the crucial process by which the crew and the studio evaluate the footage that was shot on a particular day to assess its technical and creative quality, informing the direction of production going forward. "Dailies processing" is the daily (or nightly) preparation of the materials—hours and terabytes of video and audio files—for this review.

Once the Dailies team receives the day's footage, the clock starts ticking. They must deliver the processed video within the agreed timeline so that it can inform the production's subsequent planning. But the challenges posed by the sheer volume of data generated by current productions immediately make themselves felt, as typical networked storage solutions bottleneck the ingest process, and limit how many operators can concurrently work on the data, leading to delays in delivering results.

Dailies processing typically includes the following operations:

01 Ingest & verify the video and audio files received from set that day.

02 Perform technical quality control (QC).

03 Process media by extracting and framing the image, adding metadata, balancing color and syncing audio using dailies management software.

04 Render and encode deliverables, such as proxy files that the editor can use for editing and compressed media that the crew can review online.

05 Manage the cameras' recordable media (memory cards) so that the production can film the next day, as well as ensure proper storage and backup of the original camera files.

By addressing these storage issues, we set out to show how Tsecond's BRYCK platform helps post-production houses improve the overall efficiency of their media workflows. BRYCK enables VFX, Sound, Color Correction and Editorial processes to be completed in less time, reducing cost and labour spent on rote tasks. We worked with Picture Shop, a well-established provider of dailies processing services, to measure the impact of improved storage performance and access on their workflows.

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The **BRYCK® Platform** is Tsecond's secure and cost-saving portable storage solution that enables users to capture, process, store and migrate massive data from edge locations to data centers/cloud. Offering capacity of up to **1PB** along with very high throughput (40 Gigabytes/s), BRYCK® enables large amounts of data captured and processed at the field/server room. With its rugged, compact, tamper-proof form factor, it can be simply, securely and cost effectively transported from any location to data center/post-production facility.

BRYCK®
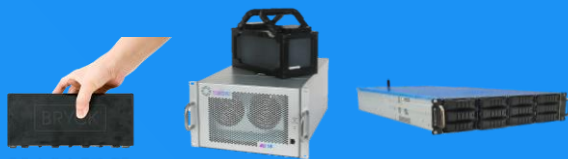
BRYCK®   Tray   Controller Node

Capacity
Up to 1PB

Data Access Speed
40 GB/s

Weight
14 lbs

Picture SHOP

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Picture Shop is part of Streamland Media, a post-production group that also includes Ghost VFX, Formosa Group and Picture Head. These renowned brands provide expertise across the globe, offering Picture, Visual Effects, Sound and Marketing services to the entertainment industry's top media companies, filmmakers and content creators.

Picture Shop sought to improve the efficiency and speed of their dailies processing service by performing bandwidth-intensive tasks such as ingestion, playback and rendering simultaneously.

Given the volume of high-resolution image data that is captured and migrated daily from the set into their systems (an average of 3 to 5 terabytes per project), reducing overall processing time–and associated costs–by optimizing the handling of these massive file sets was identified as key to keeping up with the ever-growing size and number of media assets delivered by production.

This approach was consistent with the strategy Picture Shop had previously employed in developing their technical pipeline: optimization through parallelization of processes.

Leveraging BRYCK

To reap the benefits of the BRYCK platform's performance, Picture Shop integrated it as the central storage volume for their dailies workflow, replacing several volumes of fibre-channel SAN storage with a single workspace that all their operators could connect to simultaneously. The dailies operators' Mac, Linux and Windows workstations connect to BRYCK over 25 GbE network via Xsan. 3-5 TB of original camera files and audio are copied from the camera cards onto the BRYCK every day, per project.

Existing Challenges

Picture Shop had to improve upon their existing system's infrastructure and capabilities to solve some key challenges.

- **Bandwidth limitations:** Their existing storage constrained the read and write performance, directly impacting how fast the data could be ingested, moved and rendered; these limitations slowed the overall flow of work.

- **Inefficient Use of Operator Time:** The low bandwidth also limited the number of tasks operators could perform concurrently. This meant that routine functions such as ingestion and dailies processing had to be performed sequentially.

- **Increased Cost:** Slow throughput and more operator hours in turn resulted in increased cost.

For example: An operator ingesting data would prevent a colorist from working on balancing color. They had to wait for the ingest task to complete before they could begin. If a colorist was rendering, another had to wait for that render to be completed before starting on their task. This single stream sequential process added unnecessary hours of delay to the job.

BEFORE
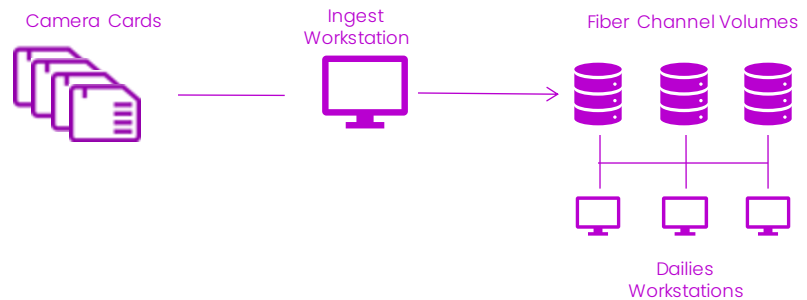
AFTER
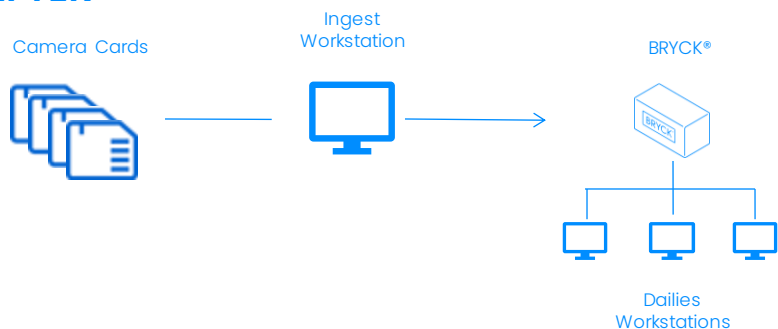
The BRYCK's high-throughput I/O enables multiple media ingestions and media processing workflows in parallel without impacting one another. In our testing, we observed that **this performance advantage allowed operators to complete their work in under 8 hours rather than the usual 14 hours.**

Parallelized Processes = Saved Time

Providing superior throughput capability, the BRYCK platform supports multiple parallel workflow processes without degrading performance. This helped Picture Shop carry out several data- and bandwidth-intensive routines simultaneously i.e. they could kick off renders while still ingesting, without noticeable impact on either of the processes.

Cost Savings

By processing content more efficiently, Picture Shop was able to reduce idle time for artists, saving operator expenses by **$60K** annually per dailies team.
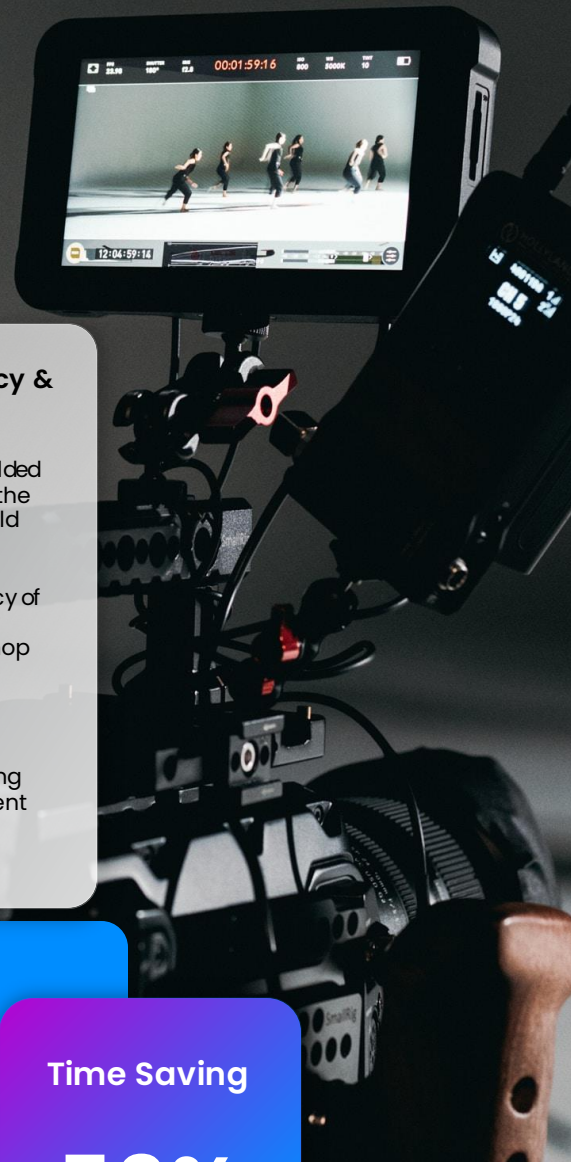
Reduced Operator Hours

BRYCK helped Picture Shop to significantly reduce operator hours spent on rote tasks, allowing the team to get their work done in under 8 hours rather than the usual 14 hours.

Improved Efficiency & Experience

This parallelization yielded huge time savings for the operators, as they could perform several tasks concurrently. This improved the efficiency of dailies processing workflow for Picture Shop by nearly 50%.
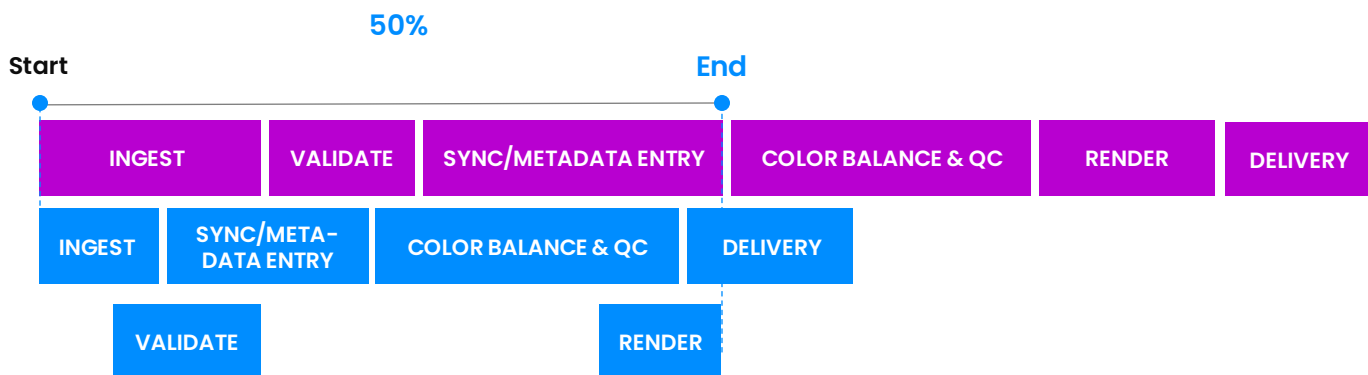
BRYCK improved artist engagement and productivity by reducing rote tasks and inefficient use of their time.

How Tsecond's BRYCK® Platform solved Picture Shop's Challenge

Time Saving

50%

50%

Start   **End**

| INGEST | VALIDATE | SYNC/METADATA ENTRY | COLOR BALANCE & QC | RENDER | DELIVERY |

| INGEST | SYNC/META-DATA ENTRY | COLOR BALANCE & QC | DELIVERY |

| VALIDATE | RENDER |

Thanks to our work with Picture Shop, we have learned that the BRYCK® Platform's features can deliver advantages to media workflows of all types

- **Process efficiency:** By delivering high-speed connectivity and storage performance, BRYCK helps teams make effective use of their time by minimizing the delays caused by constrained bandwidth that impacts data transfer, rendering and other non-creative or administrative tasks.

- **Resource Effectiveness:** BRYCK enables parallel data access to all operators at blazing fast I/O speed of 40GB/s and prevents data corruption through its self healing capability, allowing them to complete multiple workflows at a time without bottle-necking.

- **High capacity:** With high data storage capacity of up to 1 PB, the BRYCK Platform allows work on multiple large projects to be centralized on a single volume. Available in 128TB, 256TB, 512TB, 1PB configurations.

- **Seamless Integration:** BRYCK transparently works with media applications and supports industry standard protocols (SMB, NFS, XSan).

- **Plug & Play Portability:** BRYCK - the high density, detachable, reliable storage device measures 4"x4"x9" and weighs only 14 pounds', it can be transported easily from / to any remote locations with poor connectivity or no data centers, allowing access to captured data anywhere, anytime.

- **Security:** BRYCK is tamper-resistant (AES 256-bit encryption), eliminates the security risks associated with migrating data over a digital connection and avoids time delays and interruptions arising from bandwidth constraints.

- **Flexibility:** The BRYCK® platform can be deployed on a per use subscription basis and easily scales with your needs for more data capacity.

There are many concrete applications for BRYCK in the production and distribution of media and entertainment that we are keen to explore, for example:

- **Use BRYCK to migrate large volumes of data across locations efficiently and cost-effectively:** Move hundreds of terabytes of 8K video files and LIDAR scans from a remote set to a post-production facility in hours–not days–by leveraging BRYCK's modularity, portability and plug-and-play capabilities.

- **Record original camera files directly to BRYCK instead of camera media:** Eliminate the need for camera cards and bypass the process of offloading those cards to get immediate access to original camera files as soon as you hear "Cut!"

- **Make large media file sets immediately available to artists and operators:** Connect their workstation directly to BRYCK, providing instant high-bandwidth access and performance to a whole group of collaborators.

- **Use BRYCK to support workforce elasticity:** Replicate a movie's full data set–hundreds of terabytes of media files–from one facility to another to enable more artists to work on the project.

- **Simplify data custody and evolve data backup and archival by leveraging BRYCK's high capacity and resiliency:** Load an entire series' raw media, renders and deliverables into a single, portable and secure storage device to deliver it for archive.

BRYCK®

With BRYCK®, big data can be captured, stored, accessed and transferred efficiently and cost-effectively, at the speed of CREATIVITY.

Picture Shop, Streamland Media's picture division, is an award-winning, worldwide state-of-the-art post production house offering comprehensive picture services to the entertainment industry's most imaginative filmmakers and top-tier studios. Our roster of innovative talent and cutting-edge technologists deliver industry-leading color, editorial, dailies, unscripted sound, and mastering and restoration services that help bring creative visions to life. Streamland Media is a global post production company that handles picture, VFX, sound, and marketing services.

Alongside our sister post-production divisions within Streamland Media — Ghost VFX, Formosa Group, and Picture Head — we bring together our industry-leading talent, technological sophistication, and creatively-driven philosophy to deliver an unparalleled and customized post-production experience.

Tsecond is an emerging leaders in EDGE data space enabling enterprises and organizations activate big data to drive insights from Edge to Data Center/Cloud.

Founded in 2020, Tsecond Inc. is an AEI HorizonX growth stage portfolio company based at San Jose, California, USA. We have developed a petabyte-capable differentiated platform 'BRYCK®', to capture, process, move and store data from Edge, any system, anywhere. This platform provides compute and storage capabilities at edges to rapidly store, locally analyze and efficiently move data from one location to another thus enabling faster data-driven-decision-making