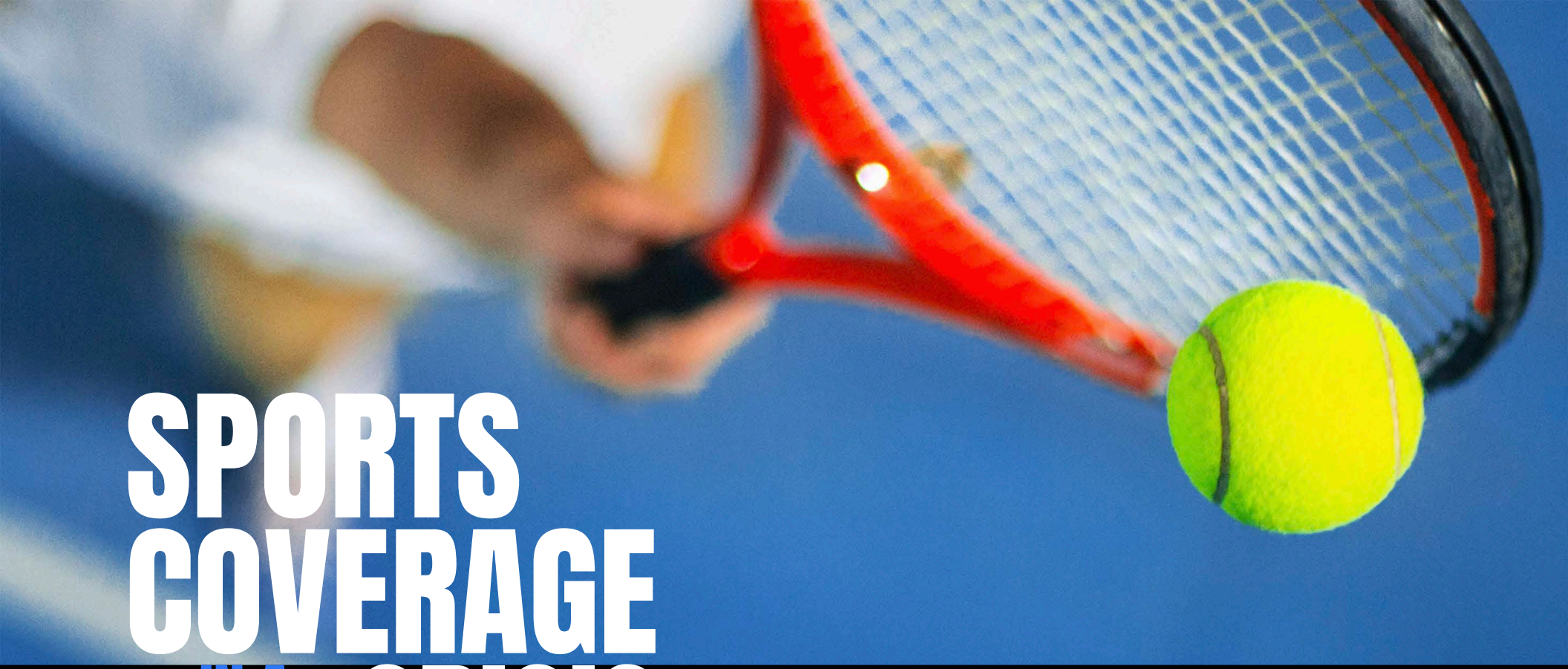


SPORTS COVERAGE IN A TIME OF CRISIS

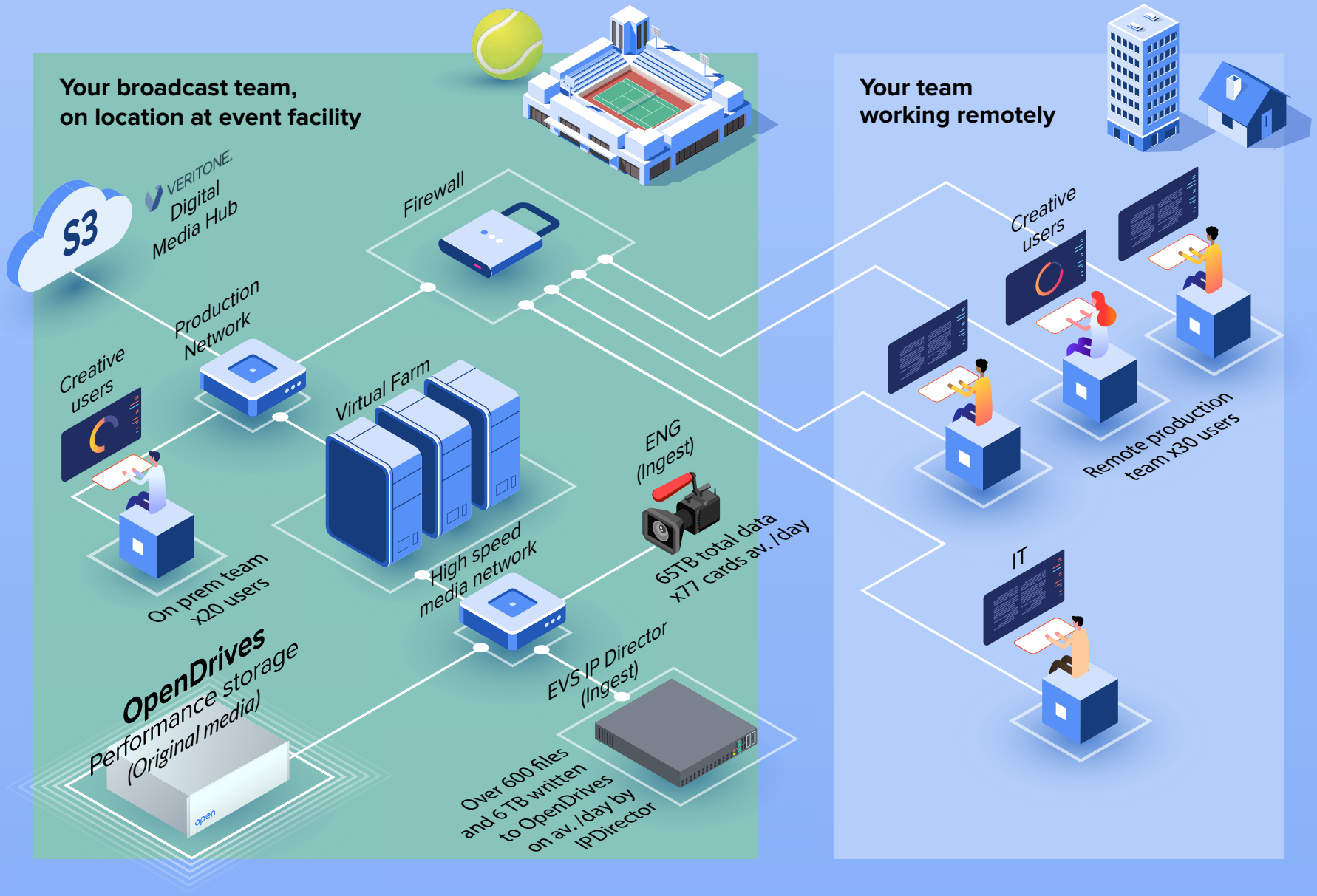
open DRIVES

Changing Up the Playbook

It took a major pandemic in 2020 to create a fairly seismic shift in the way sports are played, which also affects how games are covered. In more normal times, broadcasting and redistributing footage of sporting events wouldn't necessitate a lot of rethinking. What we used to take for granted—ensuring adequate staffing of coverage by sending the full complement of required technical and creative personnel onsite to a packed stadium or other venue—was hampered. Like the sporting events themselves, so much was changed up and reinvented to adapt to these unexpected societal conditions arising in 2020.

THUMBWAR and OpenDrives Anywhere

Leveraging OpenDrives native capabilities, called OpenDrives Anywhere, THUMBWAR enables remote editors and creatives to work with content feeds from the various tennis matches without being co-located on the premises.



THUMBWAR

THUMBWAR is a Los Angeles based consultative group of creative-minded technical personnel with deep experience in production, broadcast, and technology integration, who is also an OpenDrives reseller.

The problem stemmed from newly issued regulations. In response to the COVID-19 pandemic, local and state governments in most cases prohibited large gatherings of people, especially at sporting events. But the games must always go on! Most certainly the viewing public wanted and needed them to, so international broadcasters stepped in to provide the much-anticipated coverage for spectators. In some ways, broadcast coverage was less affected by the tightened regulations, but some adaptations in processes and workflow were necessary to accommodate less people onsite to provide coverage. Obviously, this is where technology always comes to the forefront to create efficiencies through flexible and scalable solutions.

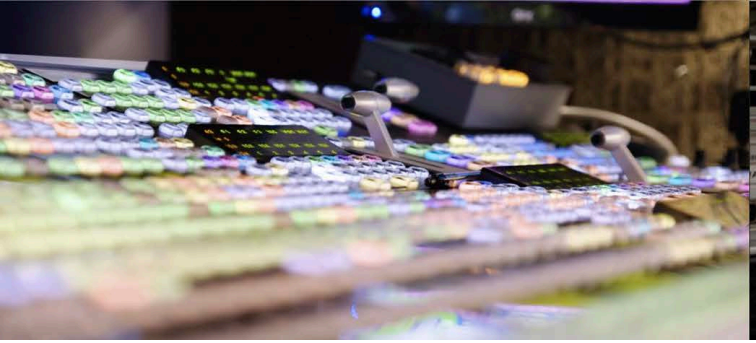
Tournament Scope

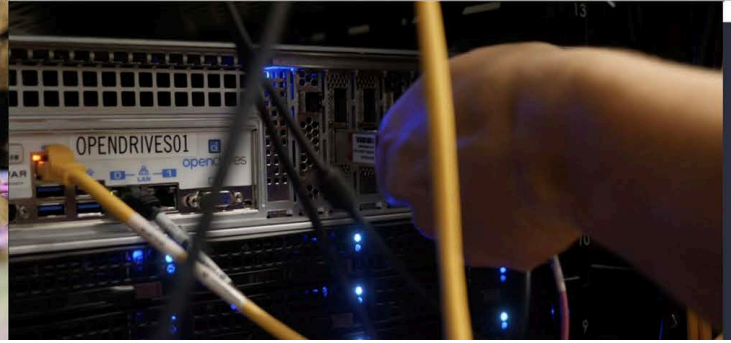
At a high-visibility grand slam tennis tournament that took place in the U.S. in late summer of 2020, a combination of high-performance technology and broadcast workflow adaptations ensured the best possible outcome for broadcast coverage of the event.

Over half a dozen large, international broadcast organizations depended on a steady stream of content in order to produce a multitude of productions showcasing every second of the tournament, along with commentary and retrospective programs analyzing every match along the way. This all added up to 17 inbound feeds of content spanning 16 hours per day, including court feeds, press conference feeds, and other program feeds. All of this content needed to be rapidly ingested, edited, and redistributed to guarantee that all client organizations were able to produce their shows effectively. And all of this had to happen under incredibly tight timelines, with little or no margin for error.

Several technology vendors combined their expertise and technologies to make it all happen. Veritone is a technology company that specializes in implementing artificial intelligence and AI-based workflows into many industries, including media, entertainment, and sports broadcast. They are the organization directly responsible for the archives of the US Tennis Association (USTA), which governs the sport of tennis in the United States. Veritone's platform is Digital Media Hub, which is an intelligent digital asset management solution serving as the destination for international broadcasters needing tennis coverage and from which organizations can select content.

THUMBWAR is Veritone's trusted partner whose role was to architect, deploy, and manage the backend infrastructure for the tournament coverage. Their responsibilities and scope included everything from the network infrastructure, the storage solution, and the EVS IPDirector solution. And as a preferred storage partner to THUMBWAR, OpenDrives delivered two hybrid NVMe and HDD enterprise NAS systems—powered by our Atlas software—to ensure ultra-high performance on the storage backend of the infrastructure.





THUMBWAR and OpenDrives collaborated on the ways in which the storage infrastructure supporting this endeavor could overcome some of the logistical challenges mentioned earlier while creating workflow efficiencies—demonstrating flexibility and scalability without sacrificing performance.

Meet OpenDrives

OpenDrives is a provider of ultra-high-performance enterprise storage solutions. OpenDrives leverages the unique expertise of their engineers and software developers—many of whom have production and post-production experience as creatives—to provide hardware and software that outperform for any workflow, under any conditions. With key partnerships with talented organizations such as THUMBWAR, OpenDrives pushes the boundaries of performance to help organizations outperform and gain a competitive advantage in their own markets.

Overcoming All the Challenges

The biggest challenge to overcome for the tournament was clearly the inability for all required personnel to be physically present at the event. The workaround THUMBWAR implemented was to deploy a means of remote access so that editors and other creatives could manipulate and then distribute digital content without any degradation in performance and throughput. To do this, THUMBWAR leveraged the capability of OpenDrives storage solutions to support remote users using virtual-machine instances to work with content on workstations co-located with the storage infrastructure. This architecture and procedural workflow, known as OpenDrives Anywhere, facilitated remote workers without disrupting the overall workflow.

So what did the overarching content workflow look like for this professional tournament? All inbound content feeds were ingested using EVS' Ingest Scheduler and IPDirector. This data went to the OpenDrives storage solution, which consisted of the two hybrid enterprise storage systems referenced earlier. OpenDrives' hybrid storage solution is a versatile and powerful hybrid NVMe and HDD system providing superior cache management and NVMe acceleration designed to optimize high-throughput workflows like this one. When necessary, a Vantage cluster provided transcoding services. From an end-user creator perspective, 7 Premier stations consisting of 4 editors and 3 media managers all concurrently accessed the content residing in OpenDrives storage. In addition, about 38 IPDirector browsers were also accessing near-line content on the OpenDrives solution, too.

To accommodate this workflow, THUMBWAR in essence created a machine room to serve as the centralized content hub. For seamless integration with each of the international broadcasting clients, THUMBWAR then deployed a network switch dedicated to each organization accessing content from OpenDrives and IPDirector.

Some organizations then copied content from OpenDrives storage to their own infrastructure, while others worked directly with the content on OpenDrives. In some instances, the OpenDrives storage solution was transparent to the client organization. In any case, the real efficiency resided in the elimination of many tiers of storage down to an outperforming centralized storage solution. “The great part about using OpenDrives is that we don’t have to orchestrate all these different setup scenarios across multiple tiers of storage,” said Brian Carr, THUMBWAR Founding Partner.

Another challenge arising from this remote-access situation was to make the architecture and content transfer as secure as possible. THUMBWAR felt that security measures could be dramatically improved from previous years, so that’s exactly what they did with the 2020 tournament. By implementing Active Directory onsite, with which OpenDrives storage seamlessly operates, each user was now distinct with specific permissions granted centrally. On top of that, users could be added securely without changes at the storage level. “We designed an equipment stack that would typically live in a data center, but consolidated it and brought it to a parking lot”, said Trevor Carlson, VP of Engineering at THUMBWAR, “and then implemented enterprise-level security for organizational access.” The reason for this enhanced security was two-fold, Carlson pointed out. “More than anything, we are aware of our responsibility as a technology vendor to keep all content and the entire infrastructure as secure as we can, but also to honor the trust put into us by each of our clients.”

As other challenges came up, even during the tournament, THUMBWAR and OpenDrives confidently worked through them together, demonstrating the flexibility at the core of the partnership and the OpenDrives solution. OpenDrives has always put a premium on customer support that goes above and beyond what is required. OpenDrives has a support philosophy of fixing the problem for the customer, regardless of whether it stems from the storage solution or something else. No matter where the issue lies, OpenDrives’ technical professionals are always ready to troubleshoot and eliminate it to get customers up and running quickly. THUMBWAR acknowledged this readiness, too. “We enjoy the fact that OpenDrives has an active and engaged support staff. That’s a definite advantage,” Carr said.

> We enjoy the fact that OpenDrives has an active and engaged support staff.
>
> That’s a definite advantage
>
> — **Brian Carr,** THUMBWAR Founding Partner

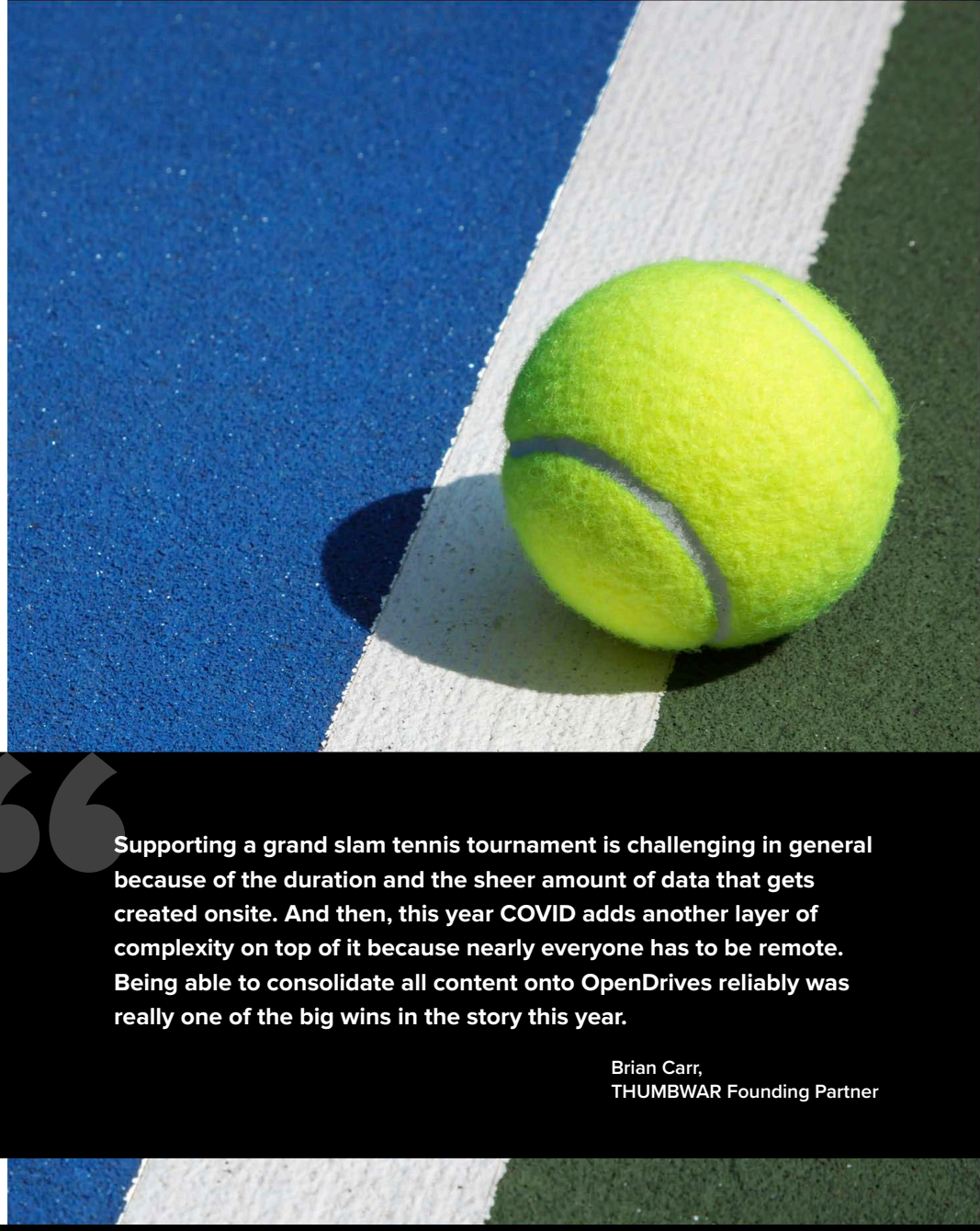
Outcome and Summary

One of the obvious outcomes and primary efficiencies that OpenDrives brought to the table relates to consolidation. Because OpenDrives storage solutions are such high-performance systems that are also flexible, scalable, and modular, THUMBWAR had a much easier storage infrastructure to deploy and manage because it was all contained within a single storage tier. In addition, with OpenDrives Anywhere capabilities, which were actually developed prior to the current pandemic but are now incredibly relevant to nearly all enterprises in the post-pandemic era, THUMBWAR could adjust to the reality that many professionals needed to get their jobs done but couldn’t do so while being co-located at the event. Creatives could now work remotely without performance degradation due to storage limitations, and the OpenDrives storage solution was able to scale to accommodate any amount of users and content. Simplicity, flexibility, and scalability are the hallmarks of OpenDrives’ solutions.

THUMBWAR's expectations for OpenDrives

The main goal that THUMBWAR had in implementing OpenDrives' high-performance storage was to reduce the infrastructure complexity and consolidate all storage onto a single tier. Because virtually everything that THUMBWAR does is storage-based, it's the one area within the overall infrastructure that could literally bring things to a halt. It's a known bottleneck they knew they had to address.

As Trevor Carlson, VP of Engineering at THUMBWAR, puts it, "We've found limitations with all of our previous storage vendors that we weren't able to optimize. It often led to an edge-case scenario where we were pushing the storage to the limits, which led to workflows that weren't always ideal." Being able to depend on OpenDrives for ultra-fast throughput and rock-solid stability, THUMBWAR could really reduce any friction related to content storage which underpins their workflows. "The reliability and throughput of OpenDrives is what we've really come to expect," Carlson said. "That's what we've experienced previously from OpenDrives, and that's what we know we'll be getting again at this event."



Supporting a grand slam tennis tournament is challenging in general because of the duration and the sheer amount of data that gets created onsite. And then, this year COVID adds another layer of complexity on top of it because nearly everyone has to be remote. Being able to consolidate all content onto OpenDrives reliably was really one of the big wins in the story this year.

Brian Carr,
THUMBWAR Founding Partner

sales@opendrives.com | +1 888-778-5491

open DRIVES