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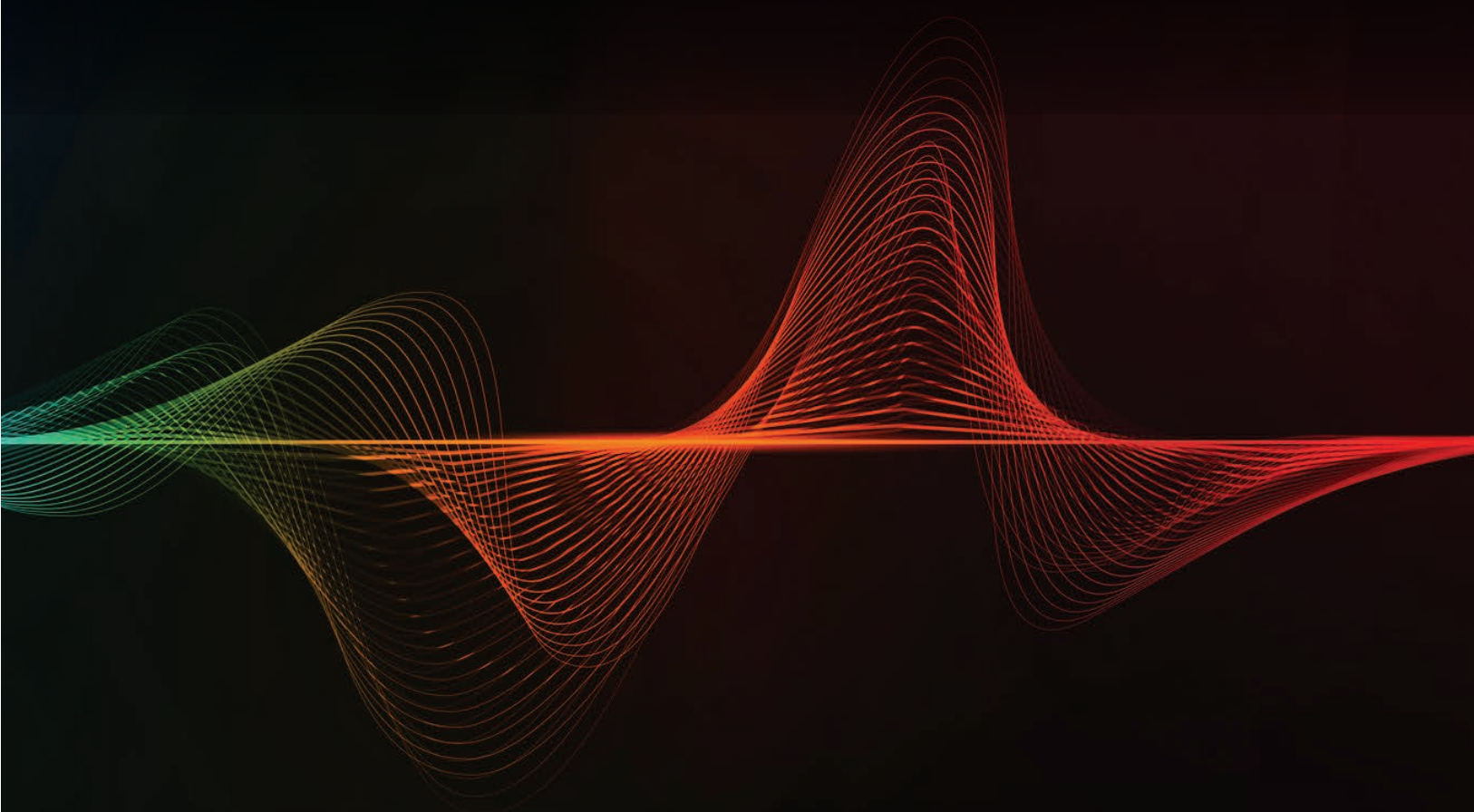

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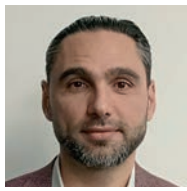

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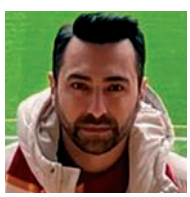

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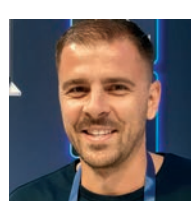

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IF IT'S NOT BROKEN, DON'T FIX IT

It's sort of been the motto with the engineers, because this is our cash register

Philip Grossman,
Editor-in-chief at TFT 1957

I think the best thing to do is to start with: Where have we come from? As we always say — or rather, as I should say — the fastest way between two points is a straight line.We typically know where we want to go, but we often forget where we're coming from. So, inthat case, let's take a closer look at what's happened over the last five to ten years and considerhow that might be affecting what's happening today.

Our industry is slow to change. Always has been.

If it's not broken, don't fix it. It's sort of been the motto with the engineers, because this is our cash register.

How Broadcasters Navigate Rapid Tech Shifts: From SDI to IP, UHD, and OTT

Over the last five years, we've seen an accelerated amount of change. If we look back, the move from analog to digital SDI took a decade or more. The growth of SDI, then the transition from SD to HD, all happened gradually over a long period of time. But in just the last five to eight years, we've seen two forms of IP emerge. Some may not even remember—we had SMPTE 2022, and now we have SMPTE 2110. We also have OTT, HD, UHD, HDR, Rec. 2020 — so much technology has been thrown at the market. And now, a lot of organizations are faced with the difficult task of deciding which technologies are actually going to make them money.

Now, let's be frank — at the end of the day, the television industry and broadcasters are in the business of making money. They do it through their product, which is entertainment, news, and sports. But again, their main goal is to make money and reduce costs. So naturally, they've had a hard time digesting all this new technology and figuring out how it's going to affect their bottom line.

Post-Pandemic Reset: Why HDR and 8K May Stall in 2025 as Broadcasters Focus on Scalable Distribution

I think, especially during the pandemic a few years ago, we rushed in and threw everything at the wall, trying to figure out what would stick or what would work. But now, I believe over the next 12 months, we're going to see our industry netting out — identifying the tracks they want to follow and the technologies that are truly going to stick.

HDR is wonderful — I love it. I've been shooting in HDR since 2016, and in 8K since then as well. But honestly, I don't think we're going to see much HDR or 8K adoption this year. We're moving in that direction, but a big part of the challenge is distribution. At the end of the day, we need to get our technologies — and our content — out to audiences, and the distribution infrastructure just isn't there yet.

The Evolving Battle for Viewers: How Broadcasters and OTTs Like Hulu and Netflix Redefine Distribution

We're going through a shift — from OTTs and cable networks to OTTs and broadcast—and the question is, how are all these platforms going to interact? I think we've definitely seen the rise of the OTT market. A lot of organizations have entered that space, and Hulu is a good example. Originally, Hulu was created when three — or possibly four—major networks came together to build a shared distribution channel.

Slowly, the individual broadcasters have sort of pulled out. And ABC is the primary shareholder of Hulu and their tech and their shows. We have Netflix growing, you know, from being a DVD mail company to being a video distributor to now being a partner in producing shows.

If you look at it, it's somewhat like the HBO model. HBO started by showing second-run movies, then moved to first-run films, and eventually began producing their own original shows and specials. We're now seeing a similar trend across several OTT platforms.

I think we'll see more competition, with platforms like Sling entering the mix. Much of this shift is driven by the contracts that broadcasters rely on for revenue. Historically, broadcasters have earned significant income through retransmission fees — payments made by cable companies based on the number of subscribers accessing their content.

From Subscribers to Viewers: How Pay-Per-View Models Challenge Traditional Broadcast Revenue Streams

In other words, the fees cable companies paid were based on subscriber numbers — regardless of whether those subscribers actually watched the content. But now, with advancements in technology, it's possible to track actual viewership. This creates pressure to shift toward a 'pay-per-view' model, where payments are tied to real audience engagement.

For some broadcasters, this shift is particularly challenging because not all of their content is competitive enough to support a viewership-based revenue model. If the content doesn't attract viewers, it can't be monetized effectively. As a result, there's been resistance within the industry, since these changes could destabilize long-established revenue streams.

Digital Tools and Platforms Reshape Content Creation: How Indie Creators Compete in a Crowded Streaming Market

Over time, the individual broadcasters gradually pulled out, and now ABC is the

primary shareholder in Hulu, along with their technology and content. Meanwhile, Netflix has evolved from a DVD mail service to a video distribution platform — and now, a major partner in original content production

However, this democratization of content has also introduced challenges. While access to tools and platforms has grown, the competition for audience attention has intensified. The sheer volume of available content means only the most compelling, well-produced material will stand out and succeed.

The increase in digital production tools, such as 6K and 8K cameras, affordable lighting, and access to cloud-based editing software, has also lowered the barriers to entry for new creators. These advancements have allowed small production companies to compete with larger studios in terms of quality. Additionally, the ability to distribute content through platforms like Hulu or Netflix has created more opportunities for these creators to find their audience and monetize their work.

At the same time, the market has seen a significant shift in the cost structure of content production. Budgets for episodic series and reality television have decreased, forcing creators to find innovative ways to deliver high-quality content on a smaller budget. This trend is reshaping the production landscape, encouraging creativity and efficiency.

The Rise of Indie Production: How Affordable Tech and Streaming Platforms Are Redefining Content Creation

However, with reduced budgets come challenges. While smaller production companies benefit from lowered costs, the pressure to deliver exceptional content remains high. This has led to a dual trend: an increase in quantity but a mixed quality of content. The democratization of tools has enabled more creators to enter the market, but it has also led to an oversaturation of content, making it harder for audiences to find truly standout work.

For traditional broadcasters, this oversaturation presents another layer of complexity. Competing for viewer attention in a fragmented market requires leveraging innovative distribution methods and adopting new technologies. Platforms like YouTube and social media channels now allow individual creators to compete with large studios, further disrupting the traditional model.

As we look to the future, one thing becomes clear: adaptation is key. Broadcasters and content creators who embrace change, invest in technology, and focus on audience-centric strategies will have the edge. Live content, for instance, remains a unique draw that continues to command high engagement and viewership. However, even live production must evolve, leveraging AI and remote production technologies to streamline costs and improve efficiency.

Advertising models are also shifting. With data-driven insights, advertisers are now demanding measurable ROI for every dollar spent. This trend compels broadcasters to optimize their ad placement strategies, focusing on targeted ads that resonate with specific demographics. The rise of programmatic advertising is another game-changer, automating ad buying and enhancing campaign precision.

Full story on the web-site TFT1957.com

BACK TO ON–PREM: WHY CREATIVE TEAMS ARE LEADING A STORAGE RESURGENCE

Tim Anderson,
CEO & CTO of DIgitalGlue and creative.space

Is the cloud's reign starting to wane? In a surprising trend, creative teams – from video editors to post-production houses – are rethinking the "cloud-everything" mindset and bringing storage back in-house. What sounds old-school is a cutting-edge movement. Even industry voices note that "on-prem storage is having a resurgence" as companies find upgrading on-site hardware can mitigate rising cloud costs). This shift isn't nostalgia for creatives working with massive media files and tight deadlines – it's about performance, cost, and control.

Why On-Prem Storage is Back (Especially for Creatives)

Creative professionals deal with huge video files, high-resolution images, and complex projects that strain typical cloud setups. Here's why many are gravitating back to on-premise storage solutions:

● Speed & Performance: Local storage delivers predictable high-speed performance for multi-stream video editing and heavy graphics without the lag of internet bandwidth or server congestion. When your team is editing 4K footage or complex animations, there's no waiting on a slow cloud transfer – everything is on-site and lightning-fast. Extremely low latency is critical for real-time collaboration, and keeping data close to the users ensures minimal delays.

● Cost Efficiency: Public cloud storage often starts cheap but can surprise you later. As projects multiply, so do monthly bills – especially with egress fees and unpredictable usage charges for downloading or moving data. On-prem storage, by contrast, has no hidden fees and a more predictable cost structure. Many firms now realize that enhancing on-prem hardware can be a faster way to reduce escalating cloud expenses. Over a project's lifespan, owning your storage can be far more budget-friendly for large volumes of media.

● Security & Control: When your footage and creative assets live in-house, you know exactly where your data is and who can access it. Teams avoid the risks of putting sensitive content on shared cloud infrastructure. Keeping storage on-premise adds layers of protection – you can restrict physical access, even "air-gap" systems (off the internet) for ultimate security. And you're not at the mercy of a third-party provider's outages or policy changes. This reliability and control are invaluable when a deadline looms or when dealing with confidential projects.

● Avoiding Cloud Bottlenecks: Cloud-based workflows can introduce bottlenecks that frustrate creative work. Ever try to download hundreds of gigabytes from the cloud on a tight deadline? Transfer times and internet hiccups can bring productivity to a halt. By contrast, an on-prem shared storage means your team accesses files over the local network at LAN speeds – no waiting on an external server or fighting for bandwidth. Your read/write performance won't randomly suffer due to someone else's traffic spike or an overloaded data center. For collaborative editing sessions, this consistency is a game-changer.

Not Your Grandpa's Server Closet: Modern On-Prem Solutions

Bringing storage back on-prem doesn't mean reverting to the old days of

Creative Teams Are Ditching the Cloud and Embracing On-Premises Storage

unruly server racks and DIY maintenance. A new class of on-premises managed storage is emerging – essentially private-cloud technology at your office, but managed for you. This is where creative.space shines, offering a modern, hassle-free twist on local storage.

Modern on-prem storage appliances pack high-performance hardware into a turnkey solution for creative teams

Unlike traditional NAS or SAN boxes that demanded a hefty capital investment and a full-time IT team, creative.space provides its storage as a fully managed service. That means:

● No massive upfront purchase – you can spread out costs with a flat monthly or annual rate. This subscription model turns storage into an operating expense, much like cloud, but with guaranteed on-site performance. You get "the freedom to upgrade to the latest technologies, reduce capital expenditures, and rely on a predictable fixed monthly cost for hardware, maintenance, and support."

● No IT headaches – the system comes with 24/7 proactive support and monitoring. Complex setup and tuning are handled by the vendor, not your team. Built-in software features and a simple web interface abstract away the geeky stuff (like managing network mounts or user permissions). In fact, creative.space's platform was designed so that even non-technical users can administer storage through an easy UI – effectively turning each system into a "datacenter-in-a-box" with enterprise capabilities, minus the usual complexity.

● All-in-one functionality – this isn't just a dumb box of disks on your floor. It's a holistic solution bundling high-speed hardware with collaboration tools. For example, creative.space includes user authentication, remote access via VPN, and even built-in file transfer and preview features, all integrated out of the box. This means creative teams can collaborate seamlessly on the same files, whether they're in the office or remote.

Crucially, these new on-prem solutions bridge the gap with the cloud rather than exist in a silo. Private cloud capabilities are often baked in. creative.space, for instance, offers an optional //CLOUD component that lets you mount your on-prem storage over the internet for remote editing with proxy files, or keep an off-site backup in their datacenter – without typical cloud ingress/egress fees. In other words, you enjoy the best of both worlds: on-prem speeds locally, and cloud-like accessibility for collaborators anywhere.

When the Cloud Fell Short: Creatives Leading the Trend

This on-premise revival isn't happening in isolation – creative teams are at the forefront of this industry trend. Tired of hitting the limits of cloud-only workflows, many studios and content creators have already made the leap to high-performance local storage (powered by modern services like creative.space) and are reaping the benefits:

● From Juggling Drives to Saving Hours: YouTube channel Brat TV reached the limits of shuttling USB drives and slow cloud transfers. After switching to an on-premise shared storage solution, they saved 12 hours per day in time that was previously wasted managing and moving files. What used to be a frantic juggle of drives turned into real-time collaboration – editors now work off the same central storage simultaneously.

● 4K Workflows Without Breaking the Bank: Boutique post-production house Real by Fake (formerly Local Hero Post) handles multiple 4K HDR shows and found that using creative.

space's on-prem storage let them do so "without breaking the bank," as they no longer had to offload tons of high-res footage to expensive cloud storage. The predictable costs and performance meant they could take on more projects confidently, knowing their storage won't be a bottleneck or budget-buster.

● At-Scale Editing, On Location: The team behind Pickathon, a large music festival, used on-prem managed storage to support 16 editors on-site, working with footage from 38 camera crews in real-time. This would be nearly impossible to pull off with a purely cloud workflow (imagine trying to upload tens of terabytes from a festival venue). Instead, their on-prem system handled the massive ingest and instant access, proving that even field productions can benefit from local high-speed storage.

Creative teams collaborating on high-resolution video projects need uninterrupted, fast access to media – a key reason they are embracing on-prem solutions.

These success stories underscore a larger narrative: creative professionals are pragmatists. They will use whatever setup best serves the art and the deadline. Over the past decade, cloud platforms have promised a lot – global access, easy scaling, and simplified IT – and those are real advantages for certain tasks. But when it comes to high-bandwidth, time-sensitive creative workflows, many teams discovered the cloud's downsides firsthand (latency, surprise costs, or even the inability to work when the internet is down). So they've pioneered a hybrid approach: keep the heavy-duty storage and editing on-premise where it runs fastest and use the cloud sparingly or in targeted ways.

The Future: Flexibility and Performance Over Hype

The resurgence of on-premise managed storage isn't about rejecting the cloud; it's about choosing the right tool for the job. Creative teams are leading by example, showing the whole industry that performance, cost control, and reliability are paramount for certain workflows – and that sometimes means keeping data close to home. With new managed solutions that remove the old burdens of on-site infrastructure, moving back on-prem no longer means going back in time. It means moving forward with a smarter, tailored strategy.

In an era of endless cloud hype, this trend is a reminder that not all clouds have silver linings, especially for creatives on a deadline. By embracing high-performance on-prem storage – turbocharged by services like creative. space's managed platform – creative professionals are architecting a future where they control their assets, accelerate their workflows, and still collaborate globally without missing a beat. It's a savvy middle ground that's proving one size does not fit all, and the rest of the tech world is starting to take note of this creative-led storage revolution.

FROM 1/3” SENSORS TO CINEMA-GRADE CAMERAS, THE LANDSCAPE OF LIVE PRODUCTION CONTINUES TO EVOLVE

For viewers of sports, events and live television, the broadcast industry is experiencing a significant evolution of camera technology. The appetite for more cinematic approaches to live production is taking hold and a true sea change has developed as the pursuit of cinematic aesthetics intensifies. The shift towards larger sensors like Super 35mm (S35) and full-frame sensors is apparent, a change from the historical broadcast choice of smaller and often more affordable sensors like the 1/3-inch and B4 lenses, which were optimized for broadcast television. The move is driven by the desire for superior image quality and a more cinematic look. The search for a more cinematic feeling coupled with an increased flexibility in post-production is reshaping visual storytelling and is propelling camera manufacturers to adapt. RED Digital Cinema is well known in the world of high-end cinema and has become a key player in the evolution of live broadcast, offering groundbreaking solutions.

The Rise of Larger Sensors in Live Production

For decades, broadcast television relied on cameras equipped with smaller sensors like the 1/3-inch and B4 mount sensors. These sensors were adequate for live broadcasts but were never ideal for achieving the cinematic depth of field and image quality that

filmmakers sought. Their smaller size dictated the depth of field, producing sharp focus across the entire image, a characteristic that gave traditional broadcast television its recognizable look, akin to soap operas.

As the demand for high-production-value content in television grew, fueled by the rise of premium streaming platforms and high-end cable dramas, the boundaries between film and television began to blur. Viewers' tastes evolved, and with the success of shows like Game of Thrones, The Mandalorian and Stranger Things, they came to expect more cinematic visuals across their viewing choices. The cinematic look –a shallow depth of field, richness of color, and dramatic lighting – has put increasing pressure on broadcasters to adopt new technologies that provide these visual qualities.

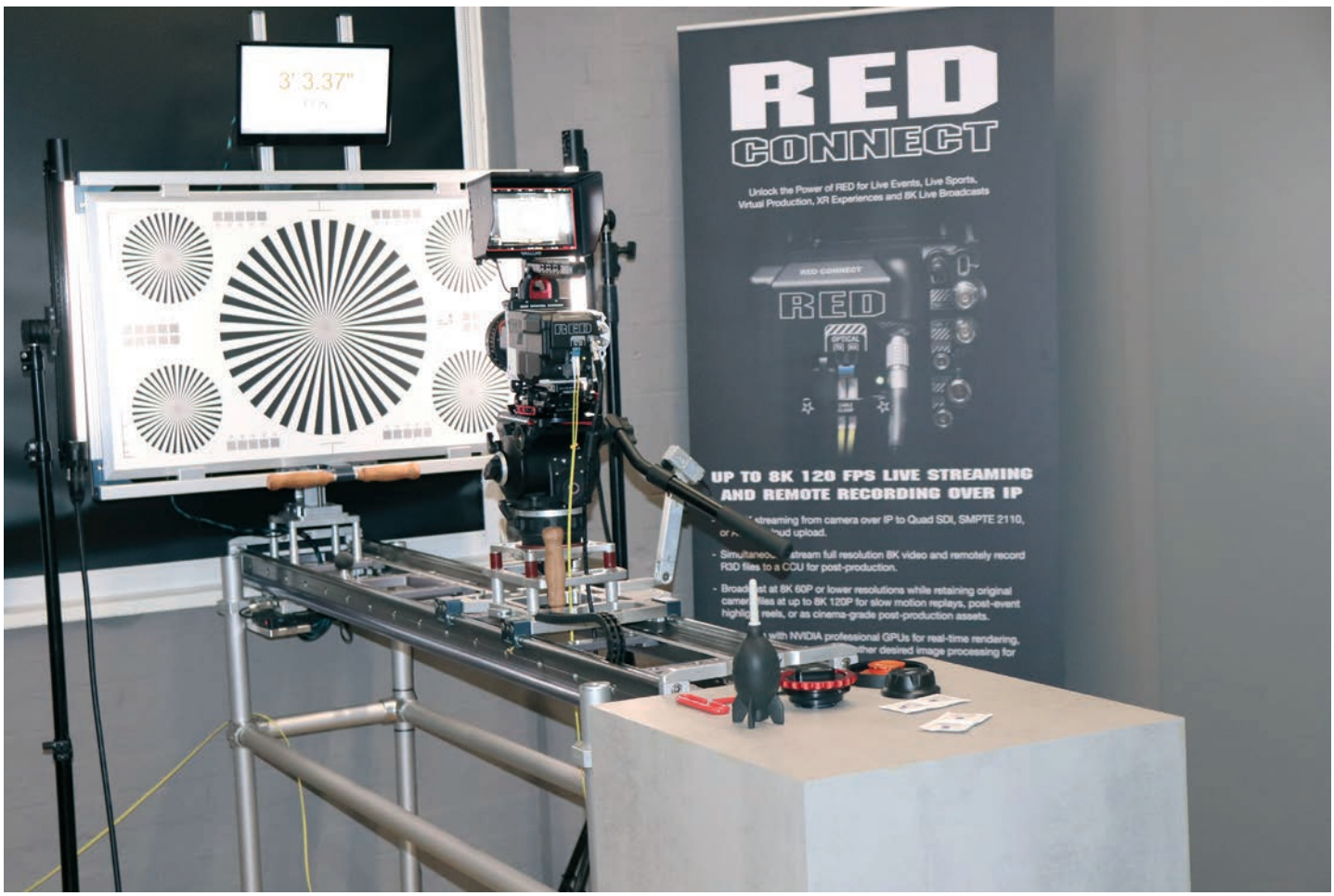
Super 35mm and full-frame sensors have quickly become the new standard for high-end television and film production. These larger sensors offer a more cinematic depth of field and superior image resolution, providing the ability to capture stunning, high-fidelity imagery with richer textures and greater dynamic range. The visual differences are striking: the shallow depth of field allowed by larger sensors enables subject isolation, which leads to more visually dynamic compositions that were once confined to feature film production. This shift is evident in prime-time dramas, sports coverage, and high-budget live events, where audiences increasingly expect cinematic quality.

What's Driving the Change?

Several factors are driving the industry-wide shift from smaller broadcast sensors to larger cinema-grade sensors like S35 and full-frame in live production.

The powerful influence is the consumer, who now demands cinematic quality. Audiences are no longer satisfied with the traditional look of images that have dominated broadcast television for decades. As high-budget streaming platforms like Netflix, Amazon Prime, and HBO, have become entrenched in consumption habits, viewers have become accustomed to higher production values typically associated with feature films. These platforms, offering content like Squid Game, Succession and The Boys, set a new standard for what television should look like, have pushed traditional broadcast networks to follow suit.

Technology is in place and expanding to support this movement that consumers expect. Advances in sensor technology now make it possible to use larger sensors in live production. The increasing affordability and availability of sensors, like Super 35mm and full-frame options, have made them more accessible to broadcasters. These sensors also provide enhanced capabilities in low-light environments, higher frame rates for smooth motion, and increased flexibility for post-production color grading. The image quality these sensors offer is significantly better than that of the traditional smaller sensors.



Fueled by the change in the tastes of audiences, advancing technology and powerful viewing platforms, content creators have responded and changed. Platforms like YouTube, Twitch, and other social media channels are pushing the boundaries of content creation, and the traditional look of broadcast television is dated. Content creators and live producers are hungry for tools that allow them to craft distinctive visuals, and larger sensors provide the flexibility they need. From sports to news and entertainment, production teams are pushing the boundaries of what's possible, often bringing cinematic techniques into real-time broadcasts.

Finally, the lines between live broadcast and cinema are blurring, and broadcasters are looking for systems that are versatile enough to work in both worlds. The desire to capture high-quality imagery without losing the ability to broadcast live in real-time has prompted the integration of cinema cameras into broadcast environments. This represents a major paradigm shift in how cameras are being used across industries.

It's a combination of factors, not the least of which is the superior image quality of the cameras being deployed into these broadcast, sport and event environments. Once a viewer sees imagery at a level that compares to narrative streaming, broadcast and motion pictures, their tastes are changed.

RED Digital Cinema: Changing the Game

As one of the foremost leaders in the digital cinema camera industry, RED Digital Cinema has played an instrumental role in shaping the current trajectory of the industry. Historically known for providing cutting-edge camera systems for film production, RED has recently made bold strides into the live production space, demonstrating the company's adaptability and forward-thinking approach to evolving market needs.

A prime example of RED's expansion into live broadcast systems is their newly introduced RED Cine-Broadcast module, unveiled at the 2024 NAB Show. This innovative module allows RED cameras to be used in traditional broadcast environments, which typically relies on the infrastructure of SMPTE (Society of Motion Picture and Television Engineers) standards. The Cine-Broadcast module fits onto the back of RED cameras and integrates seamlessly into a broadcast workflow. By providing real-time return video monitoring, the module allows camera operators to shade the camera using traditional broadcast Remote Control Panels (RCPs), making it far easier for broadcasters to adapt RED's high-end cinema cameras to live broadcast needs.

Jeff Goodman, RED's VP of Product, notes, "The demand for cinematic quality in live events continues to grow, but with the cinema and broadcast worlds having vastly different workflows and ecosystems, the differences have been a barrier to achieving this. Our new Cine-Broadcast module

bridges this gap, allowing for seamless integration into SMPTE standard broadcast environments and bringing all of the latest cinematic innovations that RED offers to live events. RED's solution provides the best of both worlds: cinematic quality with broadcast-compatible functionality".

RED: Bridging the Gap Between Cinema and Broadcast

The RED Cine Broadcast module bridges the gap between high-end cinematic production and the more traditional broadcast space.

The RED Cine Broadcast module allows operators to easily shift between broadcast mode and cinema mode, giving them the flexibility to operate in SMPTE-compliant environments while also offering the distinct visual style of RED cameras. The integration of broadcast-compatible elements — such as shading and monitoring via RCPs — ensures that live production crews can work seamlessly without sacrificing the visual integrity of the production. RED recognized that broadcasters were increasingly seeking cinematic quality but were hesitant to abandon the tried-and-tested broadcast infrastructure that smaller sensors provided.

By offering a solution that combines high-quality cinema visuals with compatibility for broadcast environments, RED provides a way forward for live production without forcing broadcasters to abandon their existing workflows.

Supporting the Shift: What Camera Manufacturers Are Doing

The industry is adapting to the growing demand for cinematic-quality live production, and manufacturers, in addition to RED, Arri, Sony, Canon, among them - have responded with cameras designed for broadcast environments, offering Super 35mm and full-frame sensor options.

They are increasingly providing modular systems that can be customized to fit specific production needs, combining broadcast industry standards with cinematic flexibility. In clear recognition of the industry's shift toward higher production values in live production and broadcast, there is more innovation coming. And, in this case, it seems that the consumer will be the recipient of better images.

Conclusion: A New Era of Live Production

The shift from 1/3-inch sensors to Super 35mm and full-frame cinema cameras marks the dawn of a new era in live production. As broadcasters seek to create visually compelling content that matches the high standards set by modern streaming platforms and premium cable television, camera manufacturers are rising to the challenge by providing innovative solutions. RED Digital Cinema, with its RED Cine Broadcast module, stands out as a prime example of how traditional cinema camera makers are adapting to meet the needs of the broadcast world. As the boundaries between broadcast and cinema continue to blur, the future of live production looks set to be defined by larger, more sophisticated sensors and new workflows that deliver cinematic quality in real-time television broadcasts.

Philip Grossman,
Editor-in-chief at TFT 1957

THE FUTURE OF CONTENT CREATION IS HERE:

How PRODUCER – Maker Machina is Leading the Digital Transformation of Content Creation and Streaming

In the fast-evolving world of content creation and streaming, where content reigns supreme and deadlines are non-negotiable, one company is redefining the industry. Meet PRODUCER — the cloud-based powerhouse that is revolutionizing content creation by bringing everything together in one seamless platform. If you haven't heard of it yet, now is the time to take notice because the future of digital transformation has arrived.

The Industry's Biggest Bottleneck: Fragmentation

For too long, organizations have given creators tools that are uninspiring — point-to-point solutions that do not co mmunicate with one another. Creating tasks in Asana, then going to Frame.io to comment, emailing the results, copying the takes back into Asana, and finally transferring files via WeTransfer. I know so many organizations working like this. And we haven't even talked about the mess within our email inboxes.

Fragmentation is the industry's biggest enemy. Assets are stored across different drives, clouds, and software suites that don't talk to each other. Collaboration is a maze of miscommunication, delays, and endless approvals. And why does IT expect creators to work in Jira? How uninspiring and the opposite of creativity! The industry needed a single, centralized platform to manage everything from ideation to final delivery. Something that inspires and pushes imagination for creativity.

PRODUCER is that solution

More Than Just a Tool — A Complete Game Changer.

Unlike traditional project management tools that cater to generic workflows, PRODUCER is purpose-built for companies with in-house media departments. Designed from the ground up with enterprise-grade features, it streamlines the entire production process — from planning and pre-production to asset management, approvals, and large file transfer. It isn't just a tool; it's a paradigm shift.

What sets PRODUCER apart?

Certification and compliance. In an era where data security and reliability are non-negotiable, PRODUCER is certified, ensuring that enterprise clients operate in a fully secure and compliant environment. This makes it the go-to platform for global enterprises looking to standardize their production pipelines at scale.

Backed by the Best: Microsoft and NVIDIA

When technology giants take notice, you know something big is happening. PRODUCER isn't just a standalone disruptor — it's a trusted Microsoft Azure partner, leveraging cloud infrastructure to provide unparalleled scalability, security, and performance. Whether handling vast amounts of footage or managing complex workflows, PRODUCER ensures that production teams can work faster and smarter without compromising on quality.

And then there's NVIDIA. Working closely with NVIDIA's Inception Program, PRODUCER is not just managing content — it's enhancing it.

They are advising us on the latest cutting-edge AI integration, helping us develop AI-powered metadata tagging and smart recommendations to optimize workflow efficiency. And with the help of NVIDIA, PRODUCER is setting the new standard for intelligent production management.

The FOMO is Real: Are You Ready for the Future?

The digital transformation of media is happening now. The question is, are you ready to be part of it? While others struggle with outdated workflows and disconnected tools, forward-thinking creators and enterprises are already leveraging PRODUCER to stay ahead of the curve.

Those who embrace the future will thrive. Those who don't? They'll be left behind.

The choice is clear. The industry is changing, and PRODUCER is leading the charge. Are you in?

Xaver Walser,
CEO, PRODUCER.
www.the-producer.io

NO LIMITS: THE FUTURE OF MEDIA TECHNOLOGY

By Cassidy Lee Phillips, Director of Customer Solutions of swXtch.io

What did we talk about before AI? The fantastic advances in technology that allowed for more processing, higher bandwidth, and smaller footprints. AI certainly accelerates some of these developments, but the real revolution in media technology is about making more with less. Humans are still in control, and we now have an incredible arsenal of tools at our disposal. We have truly entered the "de-materialized," "de-coupled," and "unchained" era of media technology.

Hardware and software solutions are so robust, and cloud architectures so flexible, that creative decisions can now take full precedence. Need to shoot in any resolution or framerate? Want to collaborate with talent across the globe? Require a scalable infrastructure that activates only when needed? It's all possible. The traditional limitations imposed by physical production environments are fading, and the industry is rapidly moving toward a landscape where anyone with a network connection can become a creator.

Raw Power: Removing Technical Boundaries

The evolution of network infrastructure is a testament to the raw power at our fingertips. The port bandwidth of network switches has increased from 100G to 400G and even 800G, while cloud connectivity can now exceed 100G per link. Servers are so powerful that they allow us to containerize endpoints within them — essentially creating "clouds within clouds." This abundance of computing resources is what enables the world's top media companies to move uncompressed ST 2110 signals through the cloud with just milliseconds of transit time.

At swXtch.io, we have been transporting ST 2110, JPEG XS, AES67, and other multicast streams through cloud infrastructure for years. The sheer computing power available today means we no longer need to limit ourselves to compressed HD or UHD formats. Instead, we can freely work with 8K, 16K, or even raw data directly from the camera. The transmission of ultra-high-resolution video is no longer a technological barrier; it's just a question of whether a production demands it.

Imagine a world where even the most complex, high-fidelity productions — once thought impossible without dedicated physical infrastructure — can now be executed seamlessly in a cloud-based environment. If you want to create your own Sphere (maybe just "Circlevision"?) or experiment with immersive technologies, the biggest technical challenge isn't moving the video—it's designing creative experiences to fully utilize these capabilities.

Remote Operations: The New Normal

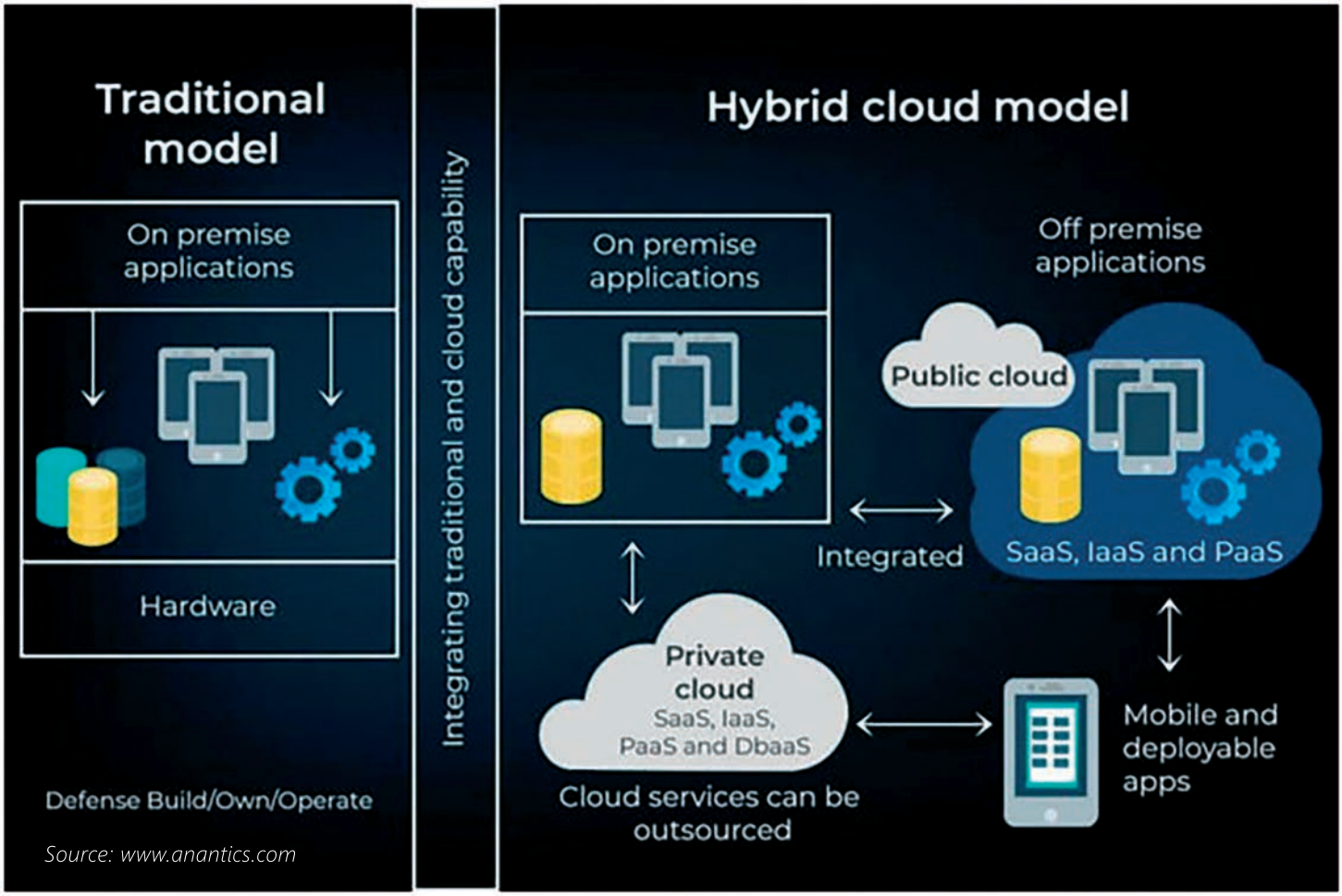
In my years as a Master Control Operator, the idea of operating a live television show from home was... insane. It was an accepted reality that the intricate demands of broadcast production required on-site control rooms, high-end equipment, and large teams working side by side. Then, in 2020, the pandemic forced the industry to rethink everything. Suddenly, remote workflows were no longer just experimental — they became essential. Broadcasters and production companies had no choice but to adapt. Thankfully we discovered, with the Internet and cloud, live media operations could be executed from anywhere in the world.

Years of data and real-world implementations have now confirmed that cloud-based production is not only viable but also efficient. The latency of cloud-ground workflows is manageable even for live events, opening up a whole new dimension of multi-site collaboration. The ability to have operators, editors, and producers spread across different time zones, yet work together in real-time, has fundamentally changed how media organizations approach live broadcasting.

Take, for example, remote Master Control operations. What was once an on-site job that required direct physical access to equipment is now routinely handled through the cloud. Ad-insertion, quality control, and even full-scale live event production are all being executed remotely, reducing the need for massive, centralized control rooms.

Real-Time Media in the Cloud

In addition to years of remote Master Control operations, we are now witnessing



real-time media production shifting to the cloud. Ad-insertion and the diversification of broadcast paths for redundancy or regionalization were among the first cloud-native applications to gain traction. But the capabilities of cloud-based production have since expanded far beyond these initial use-cases.

One of the most compelling examples of cloud-based production was seen during the largest international multi-venue sports event of 2024. When the production team outgrew their on-premise audio intercom system, they turned to the cloud for a solution. My team at swXtch.io connected their belt packs and virtual panels through our virtual network switch (cloudSwXtch), transforming the cloud into a fully dynamic and non-blocking multicast network. This allowed for hundreds of live conversations to occur simultaneously, with IGMP joins and leaves happening in milliseconds—ensuring instant connectivity every time someone pushed the "talk" button.

The growing list of virtualized media services available today is staggering. Purpose-built hardware still has a place in live production, particularly for capturing video and audio at the source, but cloud data centers are now incorporating GPU and FPGA acceleration, allowing even the most intense workloads to be processed remotely. Uncompressed video workflows are already functioning in cloud environments, limited only by bandwidth availability and the complexity of production requirements. While hosting a full UHD production switcher in the cloud may still be a challenge today, it's only a matter of time before that, too, becomes the norm.

The Expanding Universe of Media Technology

Every time we gain access to new technological resources, we push the boundaries of what's possible. Funny how we always find a way to do this. The moment an extra lane is added to a freeway, traffic expands to fill it. The same principle applies to media production — global connectivity and virtualization allow us to create more complex shows than ever before.

But here's the real shift: instead of simply expanding workloads, we are now consolidating them. Increased hardware capabilities mean more processes can be handled by fewer systems, reducing points of failure while simultaneously increasing flexibility.

Today, in the world of HD and UHD video resolutions, we can no longer blame network infrastructure for limitations. The old constraints of bandwidth and computational power have largely disappeared. Costs, once a major concern, have also been reduced as cloud services become more scalable. The result? Higher-quality productions with fewer resources. More events being covered than ever before, including those that previously wouldn't have justified the cost of a traditional production truck. The democratization of media technology is happening before our eyes.

Anyone with a network connection can now be a content creator.

The Role of AI and Automation

AI has undoubtedly played a role in reshaping content production. However, rather than replacing human creativity, AI can augment it. We are seeing AI-driven automation in areas such as graphics manipulation and regionalization of broadcast channels, allowing for greater efficiency and customization.

AI is also streamlining traditionally labor-intensive processes, from live translation and closed-captioning to automated camera tracking and smart editing.

But despite these advancements, the role of human creatives remains irreplaceable. In fact, we may be entering an era where creativity and creative problem-solving hold more value than engineering expertise.

As AI simplifies technical configurations and workflow management, professionals will need to focus more on strategy, storytelling, artistry, and audience engagement.

Security, Reliability, and the Risks of Virtualization

Of course, moving production to the cloud introduces new risks. Virtualization, while powerful, must be approached strategically.

The greatest danger isn't necessarily data security breaches — it's failing to diversify resources.

The key to ensuring reliability in a cloud-driven environment is redundancy. Unlike legacy infrastructure, where a failure of the SDI router could bring down an entire production, modern environments offer the ability to distribute workloads across multiple network paths and cloud data centers.

This level of resilience is unprecedented, but only if organizations take advantage of it. Those who rely on a single-threaded workflow are at risk of disruption.

Will Traditional Hardware Disappear?

Despite the rapid shift toward virtualization, traditional hardware solutions will not disappear entirely. Cloud data centers are built on physical hardware, live production still depends on cameras, microphones, and other essential capture devices. If you are not using someone else's data center- you are building your own. The shift is not about replacing hardware.

The media industry is moving toward a hybrid approach — leveraging cloud-based infrastructure for flexibility while maintaining specialized hardware for tasks that still require it. This is not an "either-or" scenario; rather, it's about optimizing the balance between software-defined solutions and purpose-built hardware.

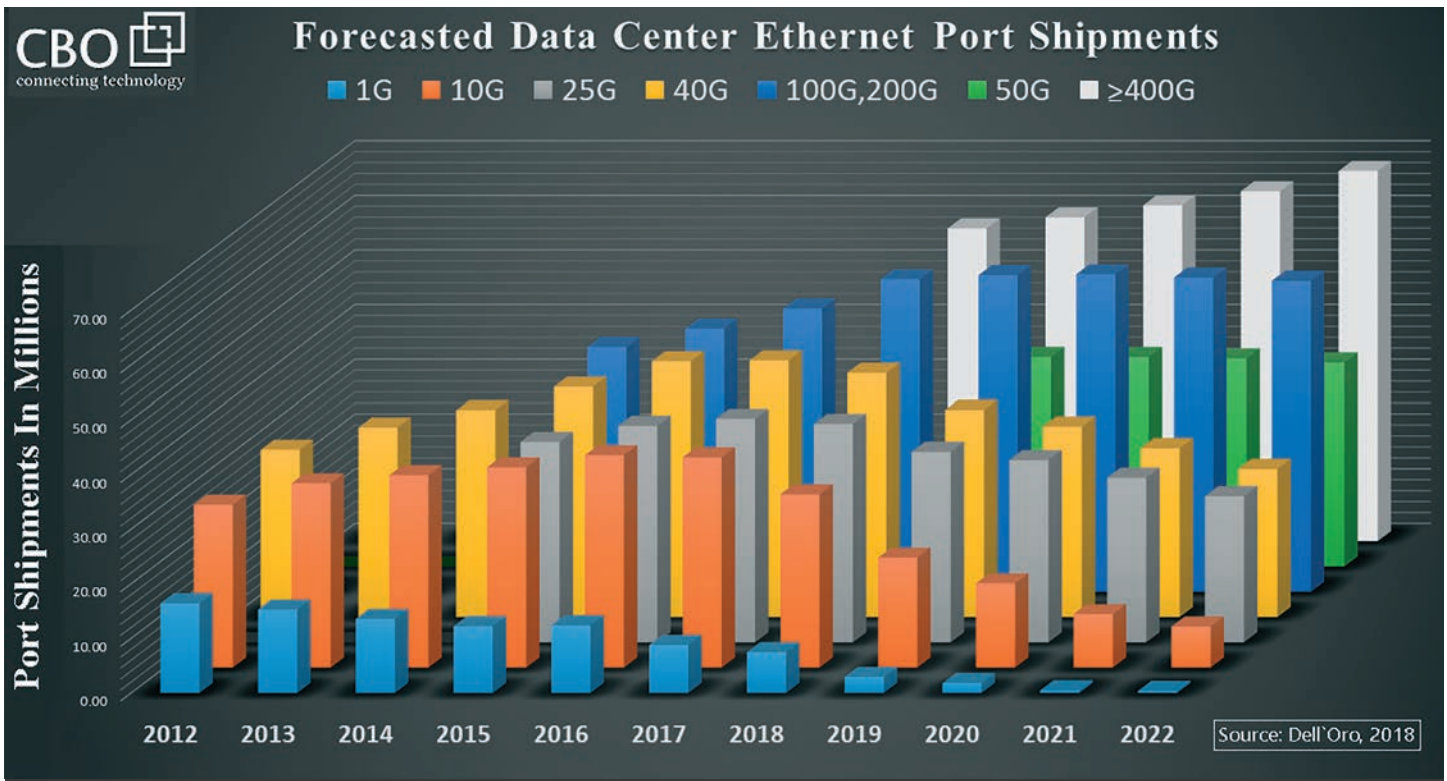
The Economic Impact on Small and Independent Studios

One of the most exciting aspects of this technological shift is its potential impact on small and independent production studios. The rise of cloud-based media workflows levels the playing field, allowing smaller studios to access enterprise-grade technology without the need for massive capital investment. In the past, high-end production tools were reserved for large broadcasters with deep pockets. Today, cloud elasticity enables studios of all sizes to scale their operations dynamically. Whether it's a one-time event that requires high bandwidth and computing power or an ongoing series with fluctuating production demands, cloud-based workflows allow studios to adjust their infrastructure in real time. This shift is already leading to the rise of new professional studios that operate almost entirely on cloud resources, navigating business cycles with unprecedented agility.

Creativity Without Limits

Perhaps the most significant impact of cloud and virtual solutions is the newfound creative freedom they provide. For some, this transition may seem daunting — after all, new technology always brings uncertainty. But for those willing to embrace it, the possibilities are limitless. Instead of being confined by physical constraints, creative professionals now have access to an infinite toolbox. The barriers that once defined production — geographic location, hardware limitations, and budgetary constraints — are rapidly fading. The only remaining limitation is imagination. The future of media technology is not about replacing humans with machines. It's about empowering content creators with the most powerful tools ever built. We are no longer constrained by the boundaries of traditional production.

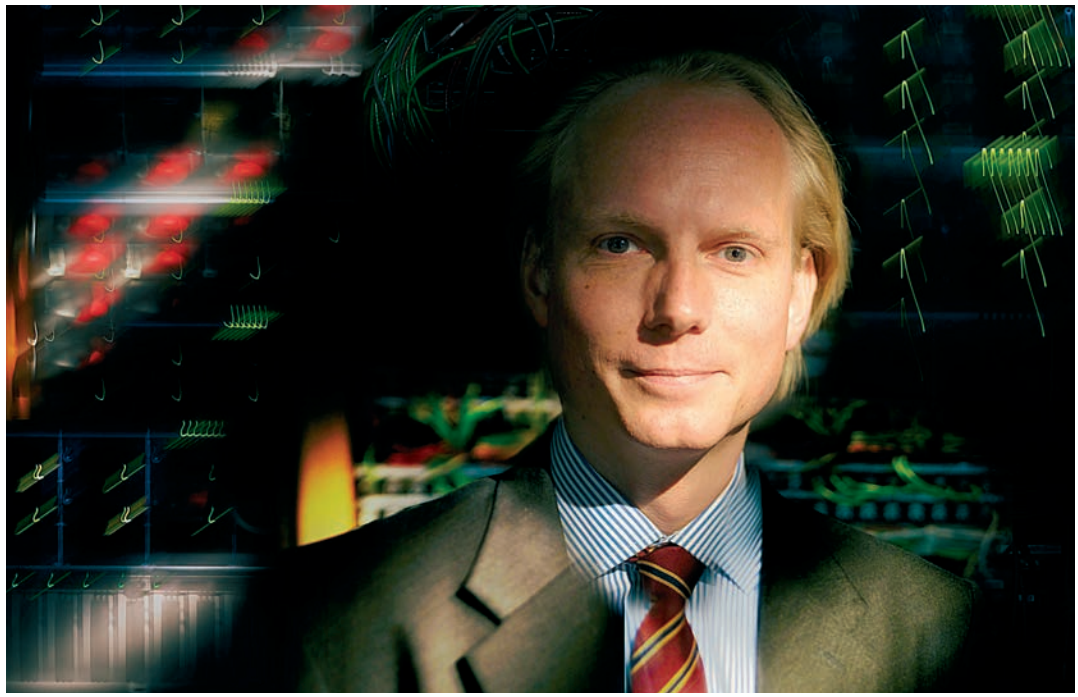
Let loose the artists upon this limitless canvas.



Source: www.cbo-it.de

IP PRODUCTION TOOLS BREAK BARRIERS: BRIDGE TECHNOLOGIES AT NAB 2025

How the VB440 empowers remote workflows, creative freedom, and media inclusivity



The Democratisation of Production: A Cultural and Technological Shift

For decades, the world of broadcast production has operated under a fundamental assumption: higher budgets yield higher quality. Sophisticated technology, specialist engineering teams, and intricate workflows were seen as the key to delivering compelling content. However, a quiet revolution is changing the landscape of media production - one that has profound implications for broadcasts of all types, from sport to news, through documentaries, live production of theatre and music, and beyond.

At the core of this transformation is IP-based production technology. Unlike traditional broadcast workflows, which relied on rigid, hardware-dependent infrastructure, IP offers scalability, flexibility, and accessibility. The result is an industry no longer defined by financial constraints but by creative ambition. This shift is not only changing how content is produced but also who has access to the tools of storytelling.

All-in-one, all-for-one

In the field of production, traditional workflows have historically relied on vast arrays of physical equipment, requiring large-scale facilities and on-site personnel. In contrast, IP-based production reduces reliance on hardware, allowing for remote and decentralised collaboration.

The potential of this change is illustrated by products such as Bridge Technologies' VB440 – an IP production probe designed to facilitate remote, distributed and live production from anywhere in the world. The VB440 fundamentally changes the logistics associated with live production workflows by eliminating the need for racks of dedicated equipment, screens, and cabling in OB vans and studios. Instead, production teams access an extensive range of real-time network engineering, video and audio production tools - vectorscopes, waveforms, AV previews, metrics, room metres and far more besides - through a single browser-based interface, accessible anywhere. This shift dramatically reduces costs, weight, energy consumption, and environmental impact, transforming live and remote production.

It also creates a more joined-up approach to production. Historically, the complexity of broadcast technology created a divide between engineers and creatives. Production workflows required specialist knowledge to operate SDI-based systems, limiting access to those with highly technical expertise. This was a significant barrier to productions where geographical, financial and logistical limits were a concern: if you couldn't afford to fly your team (and equipment) to the production site, then you were barred from access.

However, the transition to IP has introduced standards such as ST 2110, making media

transport and processing more intuitive, interoperable and responsive in real-time. Modern interfaces and software-driven workflows empower production teams from anywhere in the world to work together, through a single interface, with next-to-no-latency. Tools such as the VB440 are designed to put best-in-class tools in the hands of specialists wherever they happen to be located. But it also allows for more generalised tool access in environments where teams are called upon to wear multiple hats at once and perform cross-over roles – since all network, audio and video production tools are tabbed within one browser window. The result is not just improved efficiency but a more dynamic and innovative creative environment, where technology serves as an enabler rather than a gatekeeper.

Media beyond the mainstream

These developments aren't just interesting on a technological level, but a socio-cultural one as well. Television has always been more than entertainment - it's a shared cultural space that informs, educates, and inspires. Yet for decades, high-end production tools have remained the domain of major broadcasters with deep pockets. Now, with the rise of IP-based, software-driven workflows and cloud-located solutions, production is becoming more accessible, allowing smaller players to match the quality and reliability of Tier One providers. Not only do they have access to a greater range of tools in software-embodied solutions, but when placed as services in the cloud, they are capable of being applied at scale. But this shift isn't just about efficiency; it's about expanding creative possibilities, enabling niche sports, independent voices, and underrepresented communities to produce high-calibre content. And the great thing is that now, with IP and software/cloud-located tools, pursuing these crucial cultural and ethical goals doesn't have to come at a cost – indeed, it comes at a profit. A broader, more diverse media landscape facilitated by more financially and technologically accessible tools means more content tailored to specific audiences, expanding markets and driving profitability.

Overcoming Resistance to Change

The IP transition in distribution is already well under way. But despite the clear benefits, the transition to IP-based production has been met with more resistance. Some hesitate due to the perceived risks of workflow disruption, while others remain loyal to legacy systems that are deemed «good enough.»

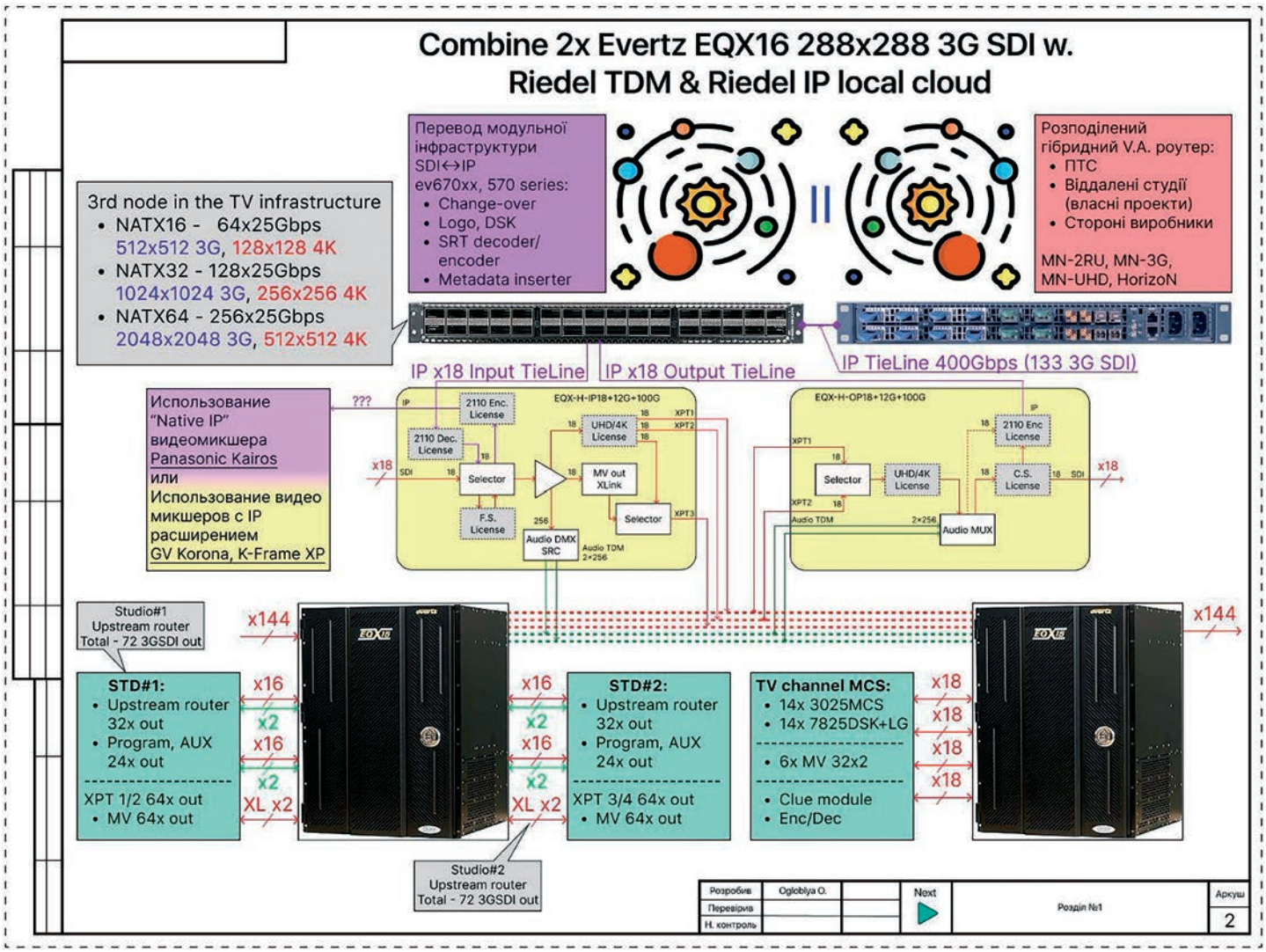
This inertia risks stalling progress. IP production is not just an incremental upgrade; it is a fundamental shift in how content is created and delivered. But it is not one that is necessarily disruptive: indeed, since tools such as the VB440 eliminate huge swathes of physical infrastructure, it really is as simple as opening a browser window.

The challenge now is for the industry to fully embrace this new paradigm, and manufacturers, production companies and broadcasters will all have a role to play. The tools are within reach. The potential is limitless. It is up to the industry to seize the moment and shape a future where bold, compelling, boundary-pushing stories can be told by anyone, for everyone.

MEDIA PRODUCTION PLATFORMS: COMPARING SOLUTIONS FROM EVERTZ, GV, RIEDEL, AND LAWO

Interview with Oleg Ogloblya, Chief Engineer at Comtel Broadcast Solutions (Kyiv, Ukraine)

Source: Oleg Oglobliya



Comtel's Historical and Strategic Choice

- Why did you choose to compare these four platforms in particular?

I've always found the question "why" difficult to answer. I often joke: "Because I want to — isn't that enough?"

But seriously, the selection of Evertz, GV, Riedel, and Lawo was the result of in-depth market analysis by the Comtel team. This is our contribution to the future of the industry.

The historical context also played a significant role. After the collapse of the USSR, in the early 2000s, global leaders of the time — Sony, Leitch-Harris, Clear-Com, Studer — entered the Ukrainian market. Alongside them came the first Moscow-based system integrators. We invested heavily in research: attending international exhibitions, visiting TV stations in Europe and the USA, and touring manufacturers' plants. This comprehensive approach is one reason there are still no foreign (including Russian) integrators in Ukraine. This allows us to implement highly innovative and complex projects — despite limited budgets.

A Technological Turning Point: IP and SMPTE 2110

– The industry breakthrough occurred in the previous decade...

By 2012–2014, when the first fully functional SMPTE 2110-based solutions emerged, it became clear we had made the right choice. These companies are shaping the industry for decades to come — in both the IP and classic baseband segments.

We watched the market consolidate with interest: Harris sold its broadcast division, which became Imagine Communications; Clear-Com joined HME; RTS and Telex merged; Sony acquired Nevion but cut back on its product range; SoundCraft and Studer joined Harman. Thus, new technological leaders emerged.

Selection Criteria and Cases of Embrionix and Ross Video

– How do you identify a promising manufacturer?

There are many interesting companies on the market. At Comtel, we developed a simple criterion: if a manufacturer demonstrates a systematic and consistent approach to product development, and their catalog features more than just one or two items, they're worth partnering with.

A good example is Embrionix. At NAB, their booth is hard to notice — just a 3×3 m pavilion. But they offered unique SMPTE 2110-based solutions for TV stations. Their arsenal included just three SFP module types — input, output,

and CPU modules. That was enough for Embrionix to become part of Riedel Communications.

– A logical move by Thomas Riedel. He bought the company and secured a place on the broadcast monopoly chessboard. And what about David Ross?

The opposite case is Ross Video. A traditional leader in video mixers, OverDrive solutions for news studios, and respectable-grade modules. But in the IP segment, things are less successful in our view. There were attempts to use IP-gateway boards for Acuity, developed in cooperation with Evertz, but they didn't catch on. Later, Newt and Iggy solutions emerged, but building a full TV channel on them is difficult. Perhaps IP simply isn't Ross's focus.

Evertz Scorpion Platform Features

– What advantages does it offer over competitors?

This one's simple. Scorpion is superior in nearly every way. It's a next-generation modular infrastructure with universal FPGA processors. The key difference: module functionality is determined by the software loaded at any given time. You can store several applications and load them as needed.

You buy just one or two MIO module types and gain vast functionality: from SDI↔IP converters to FS, UDX, DSK, logo inserter, and change-over processors. Modules include both external connectors and ports for the internal 12G-SDI and IP bus.

Chassis range from 2 to 36 modules, including integration into NEXX hybrid matrices. Each chassis is essentially both a 12G SDI matrix and an IP router. There are also SFP module slots (10/25/100 Gbps), enabling flexible IP network connections or optical transport.

– Where is Scorpion most effective?

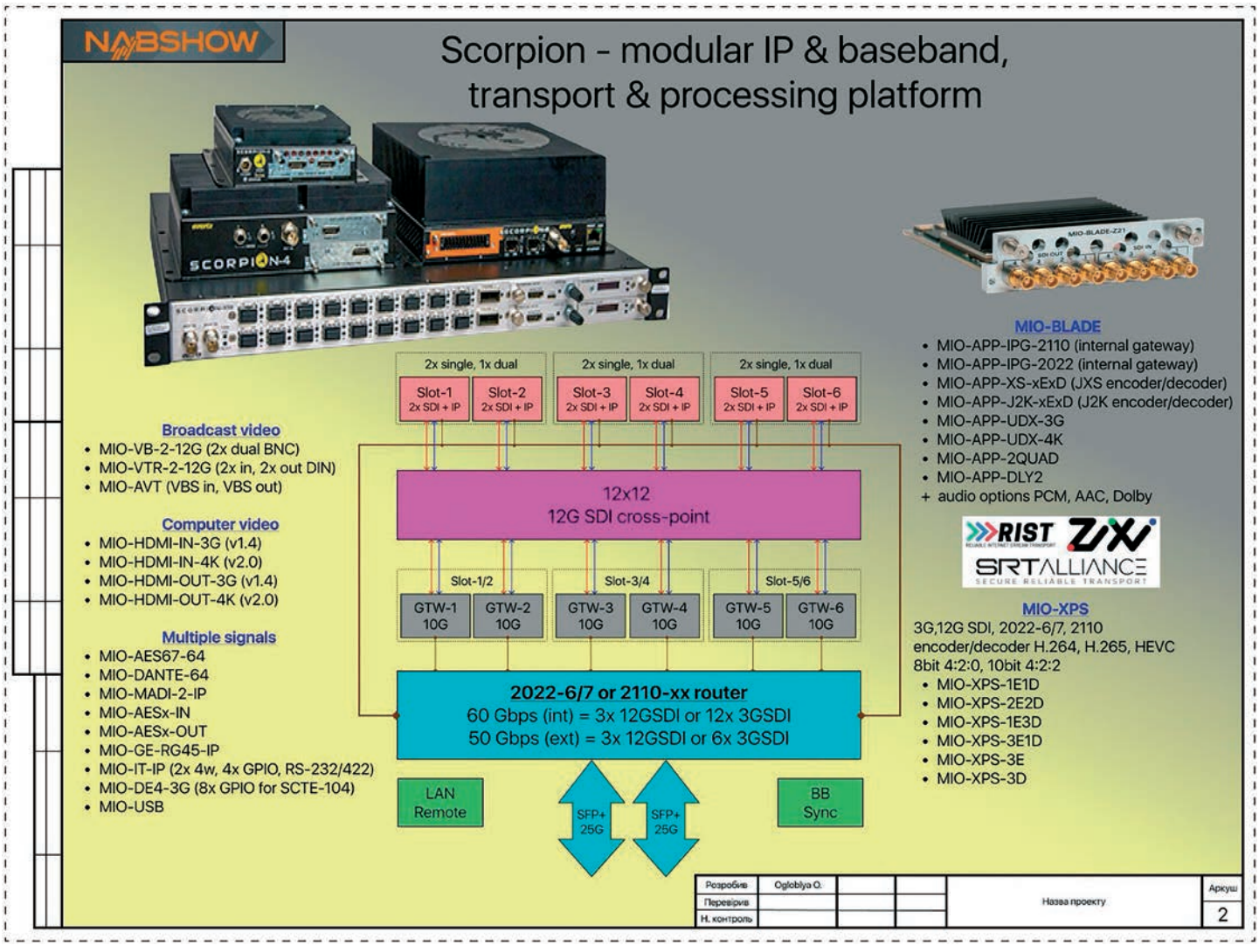
It's ideal for network processing and remote production. We've long stopped using standalone FS or audio embedder/de-embedder modules — they're now built into the matrix. But floating UDX, DSK, and audio processors accessible from any point in the network? That's a powerful advantage. Remote production is especially relevant when local network providers are willing to cooperate.

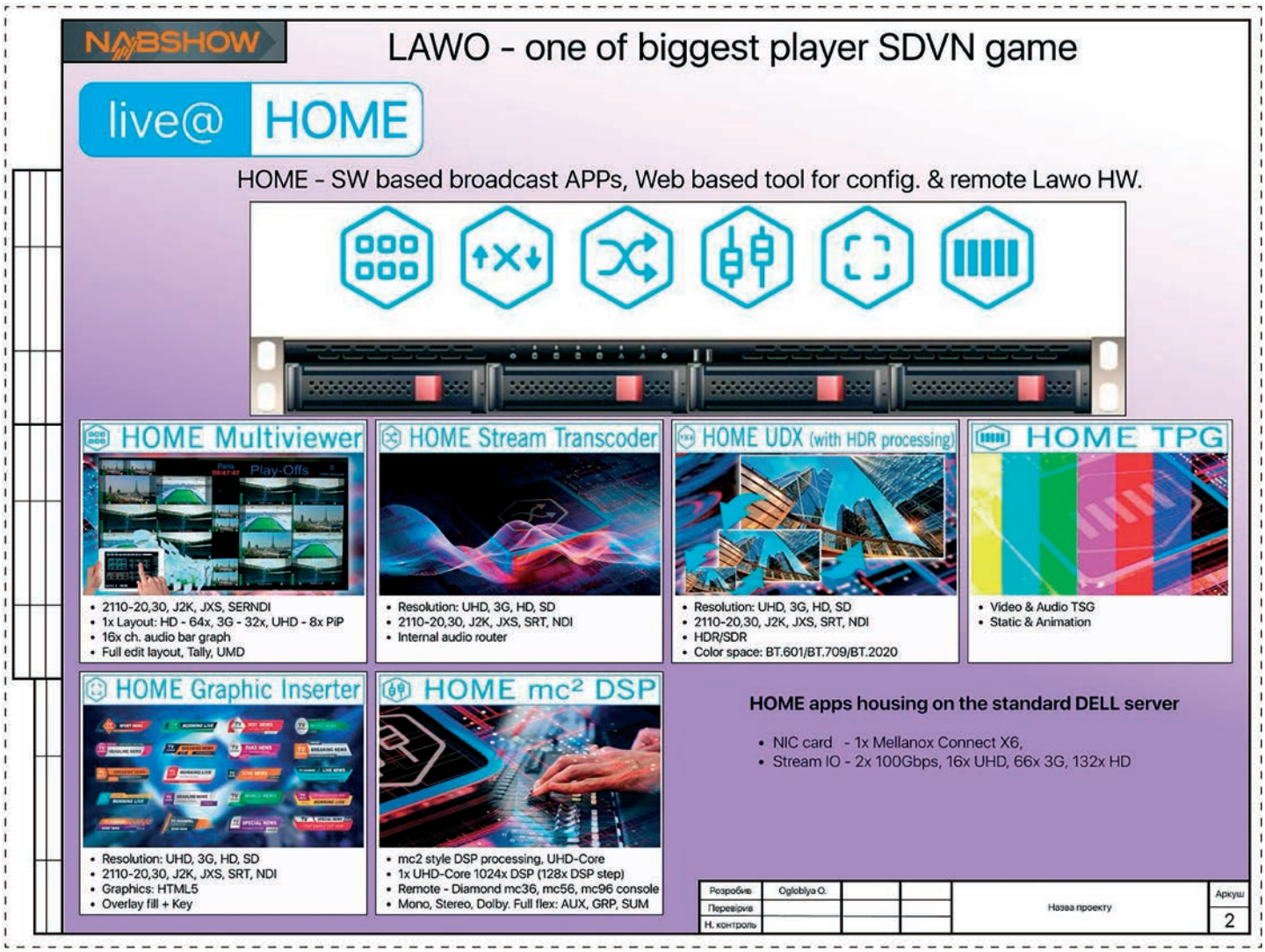
Cost Comparison: IP vs. SDI

–What matters more — cost or functionality?

Cost is the key issue today. IP versions of identical equipment are 1.5–2 times more expensive than SDI. Show an investor the price of an IP video mixer vs. SDI — the project might be scrapped at the first meeting.

But direct comparison is unfair. A system becomes cost-effective only when most equipment is switched to IP. "Extra" gateways drastically reduce efficiency. That's why it's crucial to design systems





replacing baseband chains with unified IP components.

Optimization example: one IP card instead of four modules

Patch panel → FS module → audio DMX module → DA amplifier can be replaced with a single gateway generating:

– Two 2110-20 (2022-7) streams

– Eight stereo 2110-30 streams

– One 2110-40 metadata stream

A network switch in boundary clock mode provides FS or CS. Platform choice then depends on taste, design, brand familiarity, and other subjective factors. Price-wise, there's little difference — SDI-IP gateways cost $800–$1,000.

Hidden Costs: Staff Training and System Controllers

– But those aren't the only expenses...

Any IP system requires staff training — another added cost. The learning curve isn't steep: just understand *.sdp files and how network switches work. Add $30,000–$50,000 to the budget if you're using a system controller — like Evertz's Magnum, Lawo's VSM, Axon's Cerebrum, etc. These allow system control via standard panels, reducing staff workload.

Controllers create a division of roles: regular shift engineers and those who tune the system. The broadcaster's IT department usually isn't involved.

Broadcasting Financial Realities

TV is capital-intensive. If you don't have the budget, you'll make do with a Harris Platinum matrix, OpenGear modules, or AJA and BM boxes. You'll convince yourself and your investor that it's functional and "good enough."

Meanwhile... Elon Musk is flying to Mars.

Platform Scalability and Software Role

– Which platforms are best for small channels vs. media giants?

Theoretically, every platform has limits. But in post-Soviet regions, few can reach them anytime soon.

Example: Evertz's NATX switch line:

– NATX-16: 1.6 Tbps (533×533 3G-SDI equivalent)

– NATX-32: 3.2 Tbps (1066×1066)

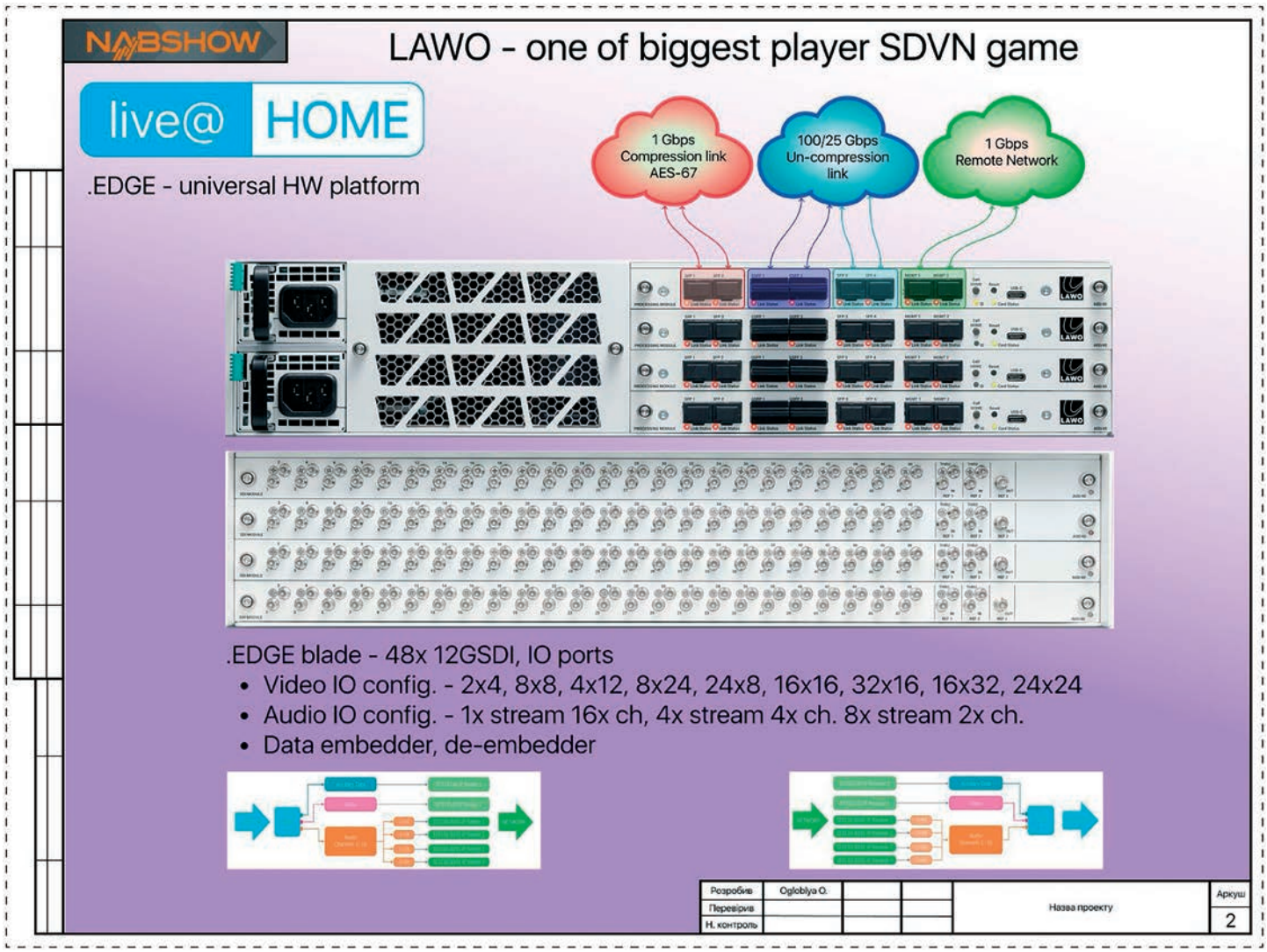
– NATX-64: 6.4 Tbps (2133×2133)

All fit into 1RU, 19" units. In reality, even 576×576 SDI matrices are rare. So "small channel" now means much bigger numbers.

– What about the controller's role in platform choice?

The smaller the budget, the more important the software. Riedel/Embrionix, for instance, uses the MN-SET system with a VUE interface — a familiar control panel (SRC, DST, TAKE). It's customizable per operator. Evertz and Lawo also offer routing software, but in our experience, Riedel's is slightly more user-friendly.

If the core is a 288×288 matrix, you



might skip an external controller. But the audio section could be 16 times larger: 4608×4608 mono-equivalent channels. The panel becomes bulky; scrolling is endless. Frame-accurate switching becomes unfeasible.

By the way, Lawo's .edge 288×288 solution is a standard 6RU kit.

SDVN, MediorNet, AMPP, and HOME Integration.

– How complex is the setup and management? What are the staffing requirements?

Once you've worked with different systems, the perceived complexity of setup feels exaggerated. After an internship at Evertz's Canadian factory and MAGNUM installation under an engineer's guidance, the logic becomes clear.

Even TSL's TallyMan, in its minimal configuration, offers many useful functions. But it all depends on the team. If the engineers are disengaged, a controller is wasted money. But if their eyes light up — success is inevitable.

IP is slightly more complex due to the number of settings. There's a big difference between a system where 1 input = 1 signal, and one where signals don't match physical ports. For example, in SMPTE 2110 setups, each gateway generates:

– Standard IP — unicast control address

– 2110-20 — two multicast streams (main and redundant)

– 2110-30 — up to 8 streams of 2 channels each, or one 16-channel stream

– 2110-40 — metadata stream

As a result, a system with 2 studios, 15–20 editing suites, a 4–5 channel playout, and an audio route ends up with 25,000–30,000 IP/multicast addresses.

– Which platform offers the full tool stack?

The answer is obvious: only a few companies. Only those producing a full set of devices can ensure compatibility and stability. The main difficulty lies in the "virtuality" of IP. You can't just plug in a monitor and see a signal. Even if a device responds to a ping, it doesn't mean there are streams. However, you can monitor the network using standard IT tools that are easy to learn online.

Important: working with *.sdp files is a critical skill.

GV AMPP Stands Apart

While Lawo HOME offers small services (DSP, DSK, UDX), GV AMPP took a bolder route: virtualizing entire departments — MCR, AVM, multi-channel ingest, playout, commentary, etc. It's an ambitious idea but raises concerns. When all you have is laptops and internet instead of hardware, you wonder — who gets penalized for an on-air failure?

Ukraine's Reality: The Cloud Isn't for

Us — Yet

In Ukraine, cloud services are a risk today. Signal loss from cyberattacks or traffic limitations is a real issue. After the war — maybe. For now, only local servers. We evaluated projects with AMPP, but 32–64 HD streams in SRT, NDI, or JPEG-XS raise questions. It's better to study real systems, not promises.

The State of the Broadcast Market and Implementation Examples

– Any real use cases in Ukraine with Evertz, Riedel, GV, Lawo?

Nobody openly shares TV channel developments in Ukraine today. Let's stick to general info: over 720 media companies operate in the country, offering solutions for every taste and budget.

Major Ukrainian media holdings, whose modernization started before the war, use Evertz EQX infrastructure elements. Although, many still run Harris Platinum — "Mr. Pz's last breath."

Riedel MediorNet is used, conservatively speaking, by 90% of broadcasters. There are over 250 frames in Ukraine now. It handles most everyday tasks.

IP infrastructure is being deployed slowly but steadily. When large-scale modernization isn't feasible, companies start experimenting. At Comtel, we've identified three key IP implementation phases:

1. Signal transport infrastructure
2. Autonomous departments and functional nodes
3. Decentralized production (especially relevant during wartime)

Interestingly, only one TV channel closed during Ukraine's three-year war. In the early months, SRT-based solutions were popular, but after the failed 2024 Olympic broadcast, interest shifted to 2110/2022. Some built remote playout in other cities, others use 10 Gbps MPLS channels. A few optical fibers and 25 Gbps SFP+ modules enable duplex transport of up to 12 HD streams over 80 km.

Ukrainian engineers are no longer afraid of IP infrastructure. OB vans, preview rooms, commentary booths, audio studios — all of this is normal practice now. Solutions using SFP modules built into switches appear cheaper than traditional BM or AJA boxes. A compact, reliable IP solution at a broadcast level is preferable.

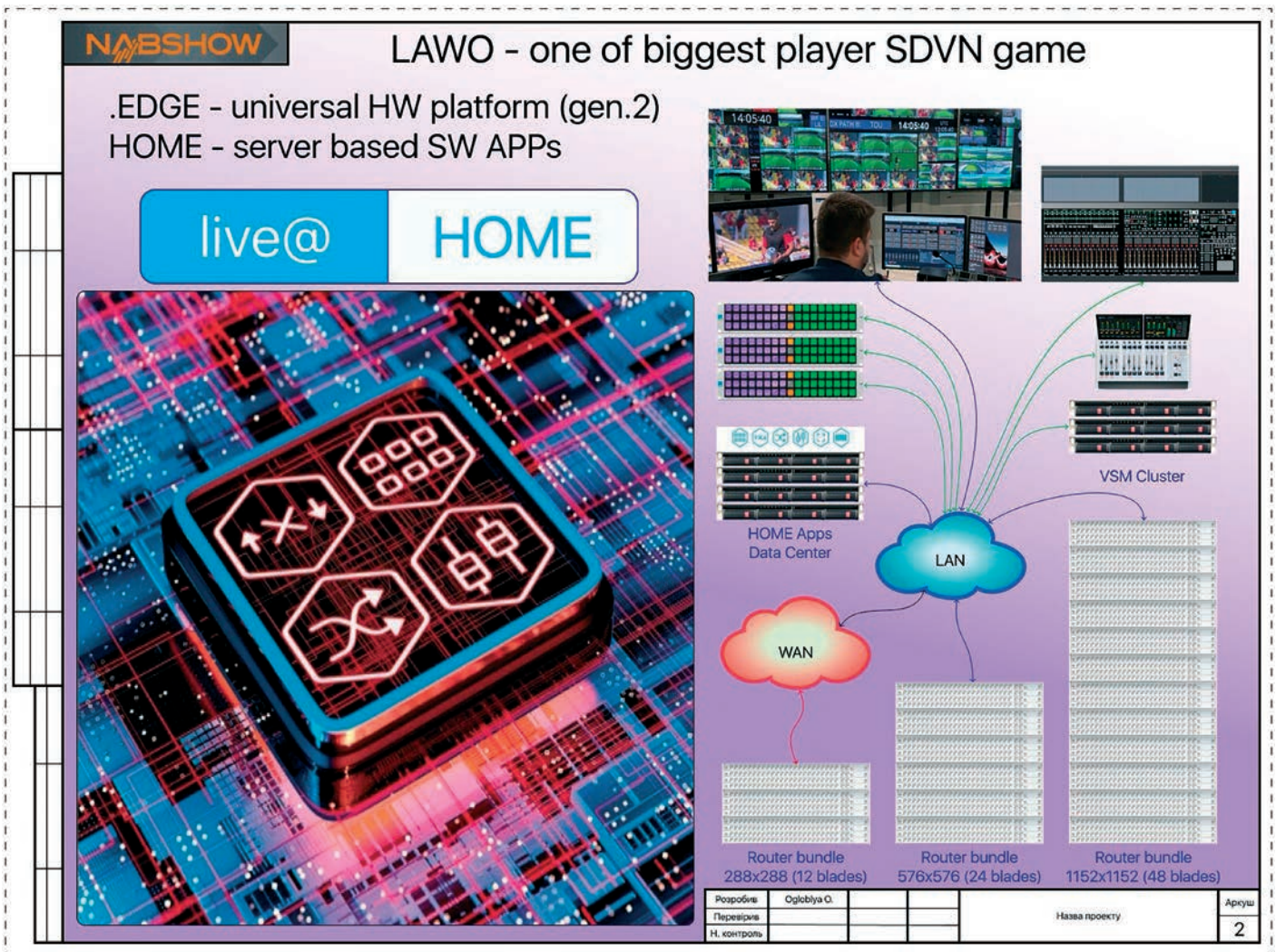
What's Wrong with Blackmagic Design?

– Why don't BM solutions meet system integrators' needs?

In a poor country, Blackmagic's model looked promising — even dangerous. At first, it seemed like "This is it! TV will run on BM!" But then we realized — it's not that simple.

We began comparing equivalent configurations. Not "apples to oranges," but "same to same."

Example: one MicroN-3G module with



a P2P license from Riedel provides:

– Video matrix: 24×24 3G-SDI
– Audio matrix: 640×640 mono
– Frame sync: 24 inputs
– Video delay: 24x
– Audio embedder/de-embedder: 24x, with 16 channels each
– MADI converters (bi-directional)
– Fiber link: 26 Rx / 26 Tx

Replicating this with BM gear, plus cables, connectors, mounting — yields no savings. It takes up more rack space, is less convenient, and lacks centralized control.

That's what's wrong with Blackmagic.

The Future of SDVN and IP Technologies in Media Production

– How will the market evolve? Which platforms are promising?

Our forecast, confirmed over the past 10 years: IP infrastructure is now a self-sufficient direction alongside SDI.

That Russian company's IBC slogan "SDI must die" didn't come true.

Even market leaders are still cautious about IP.

IP isn't "better" or "worse." It's just "different."

Within the IP segment, two conditional camps have emerged:

HW platforms (hardware-based solutions):

Includes Evertz, Riedel, Axon, Nevion — companies making their own hardware or OEM components.

SW platforms (process virtualization):

Examples: Lawo (HOME), GV (AMPP), playout automation. Less hardware diversity, more emphasis on servers and software.

This split is fluid. For instance:

– Lawo offers the .edge hardware platform
– Evertz has dozens of virtual services

Comtel's Conclusion:

Long-term, no platform holds an absolute advantage.

A full infrastructure upgrade in 10–15 years costs about the same across platforms.

The myth that software is easier to scale and update — is a marketing gimmick.

Computers age faster than pro gear, and "hot" software updates are no easy feat.

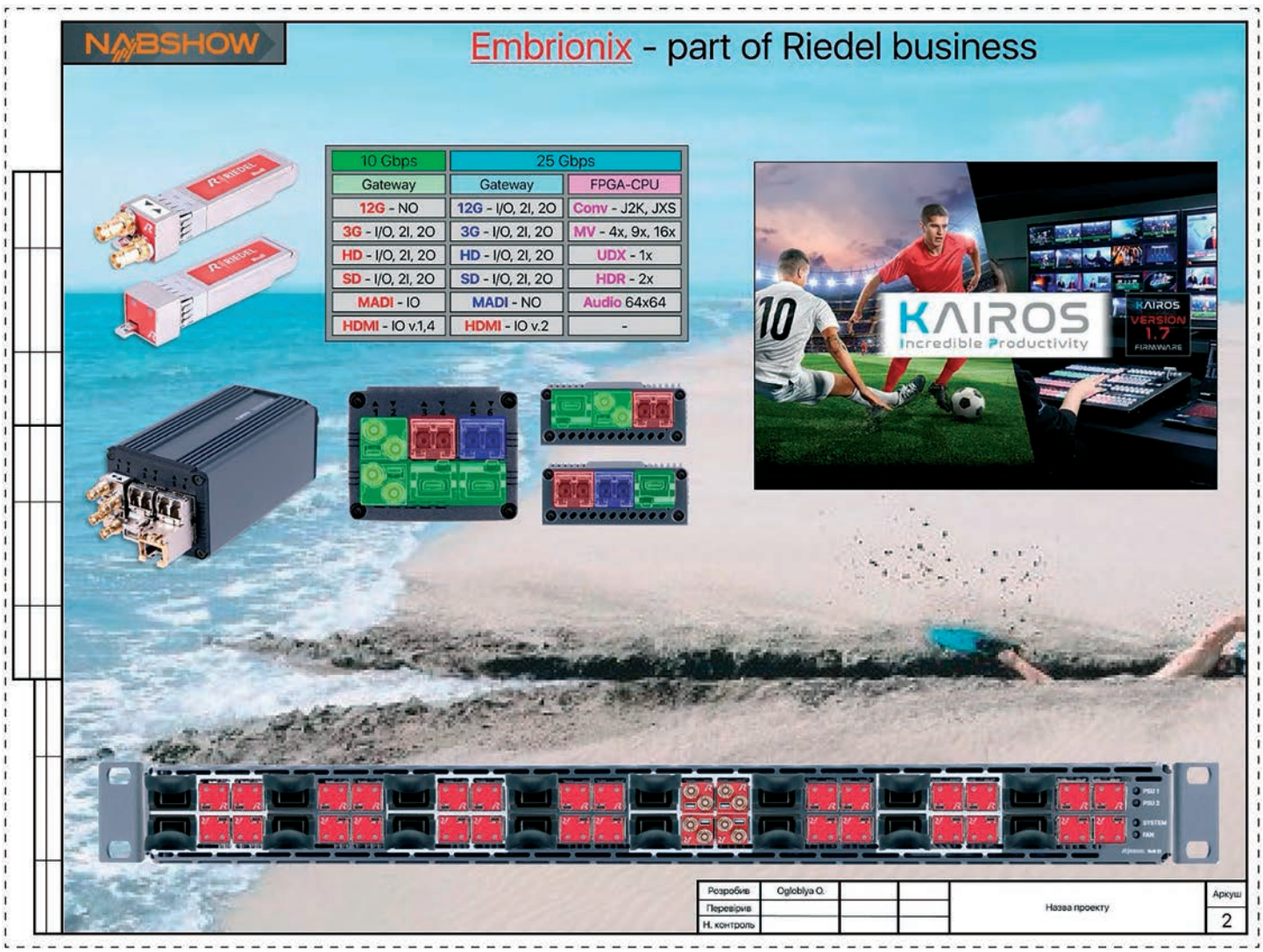
The main thing is aligning technologies with real tasks and capabilities.

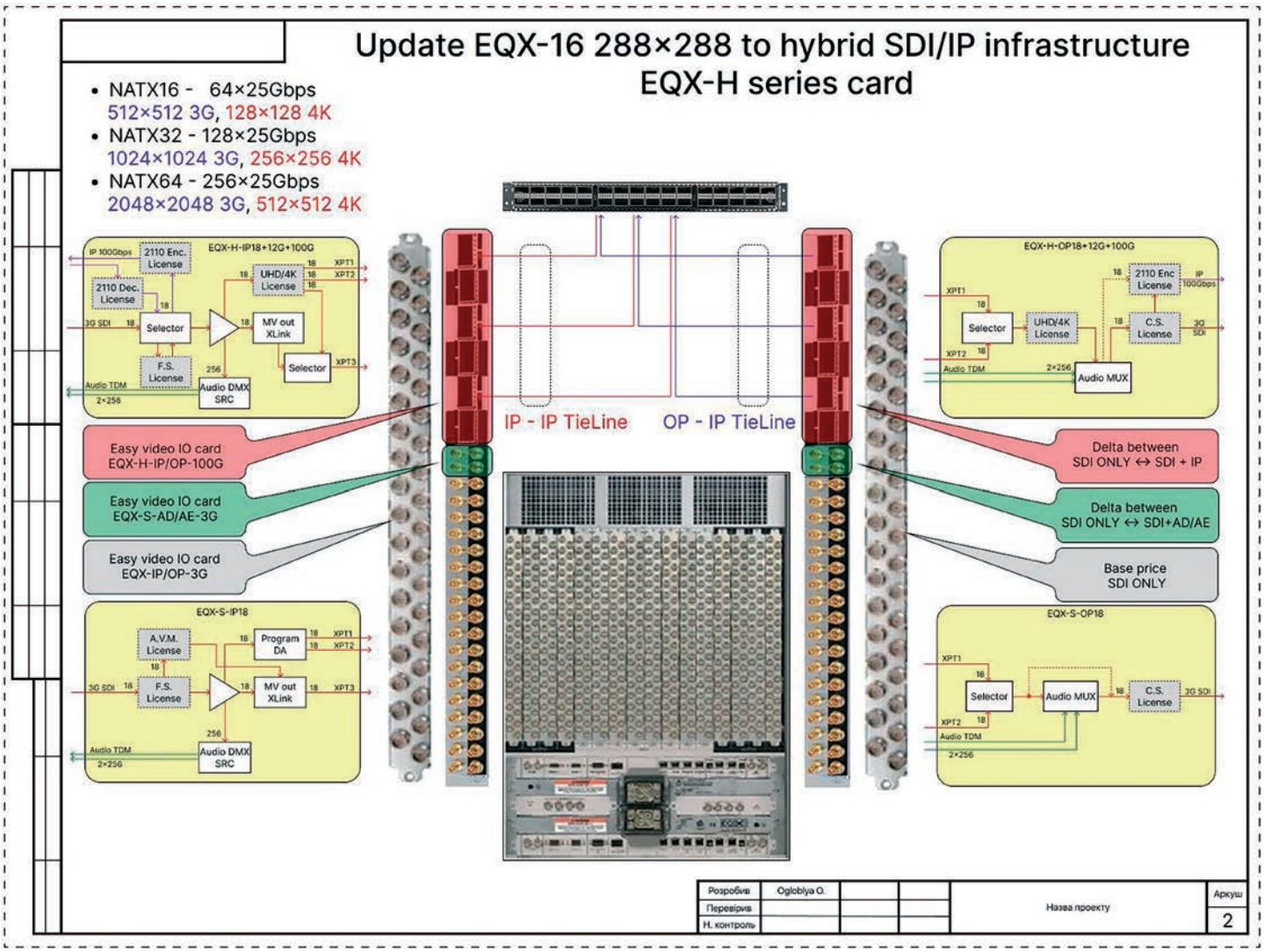
Manufacturer Support and Service Levels

– What do Evertz, Riedel, GV, and Lawo offer?

Typically, IP system support is mandatory and comprehensive.

You can't buy a project solution





without training at the factory.

Training is mandatory for technical department heads and shift engineers.

Exceptions are selective deliveries through authorized dealers with the proper skills.

(Like Comtel.)

"The best service is not needing support at all."

– Evertz MAGNUM under Linux ran 12 years without reboot

– Lawo VSM under Windows — 8 years with no crashes

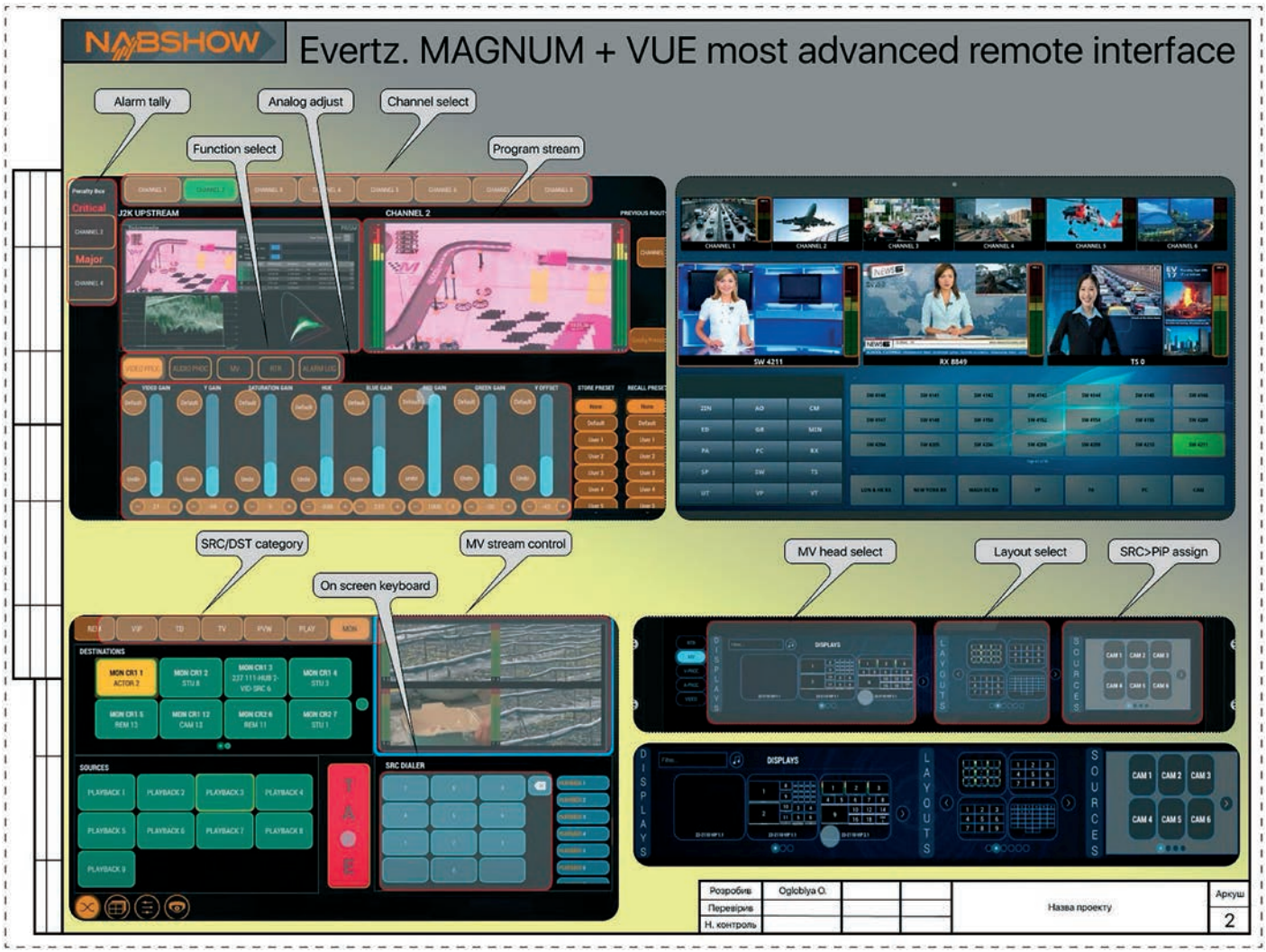
(They eventually bought new servers and kept them as cold spares)

Firmware updates were rare — mostly to address non-compliance by third-party vendors with SMPTE or ITU standards.

An example of user responsiveness:

Lawo mc²36 initially lacked a De-esser effect — users asked, it was added in the next update.

These small details define a manufacturer's level.



Additional Capabilities and Cloud Technologies

– How are platforms expanding? Any cloud or MAM integrations?

In IP environments, compatibility is the top enabler.

Just as there aren't "different SDIs" from Sony or Panasonic, there can't be "different SMPTE-2110s" from different vendors.

Important note:

NDI and Dante are proprietary protocols. Until NDI becomes SMPTE and Dante becomes AES, they can't be considered foundational.

Comtel's key mission is verifying cross-vendor compatibility.

We're confident we offer truly compatible solutions.

The cloud is a trendy but expensive tool.

Especially in broadcasting, where legally, a virtual product can't be

capitalized.

Who even buys licensed Word or OneDrive? Now imagine a six-figure cloud investment.

As one CTO said:

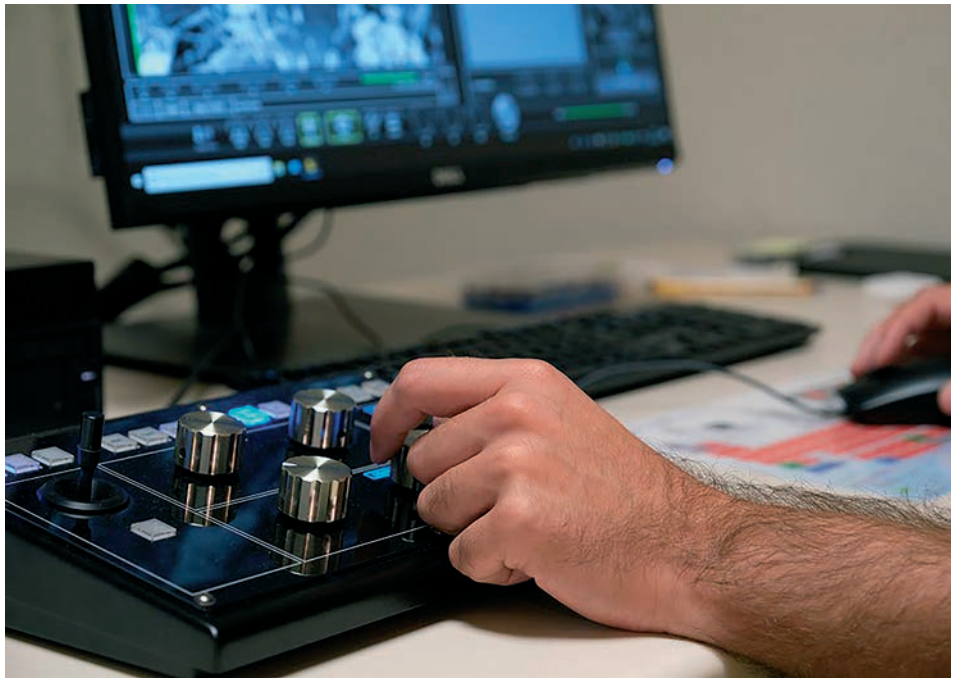
“The cloud is a $100 bill shredding service”.

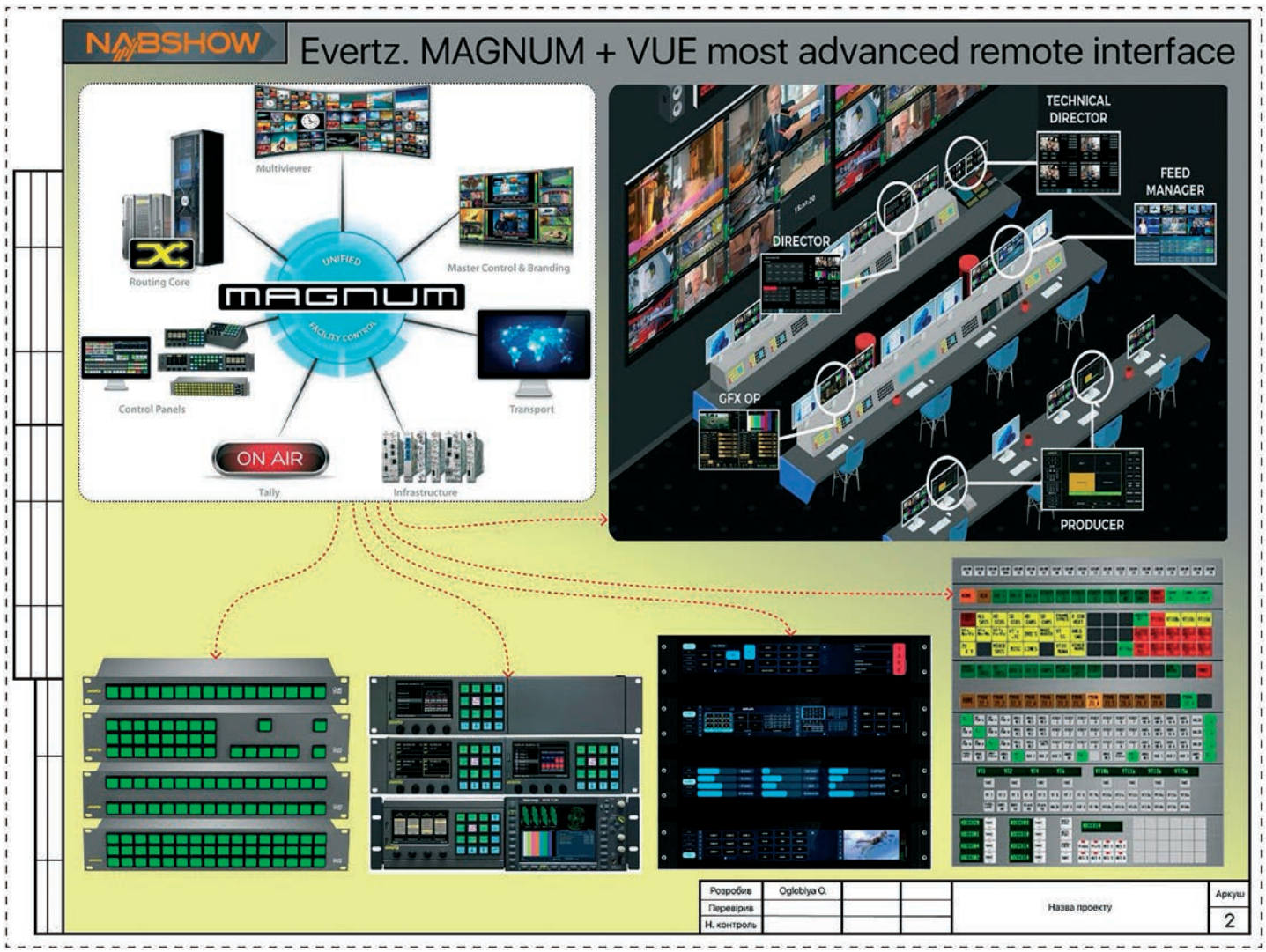
Yes, it offers new functions and remote access. But under cyber threats — it’s a risk. As they say, “admin:admin” credentials are still a thing.

Still…

Many manufacturers now limit cloud services, offering only specialized ones (e.g., Lawo or GV hosting MAM in their own cloud).

In this case — the manufacturer is responsible for performance.





MICHAEL BLACKMAN ON BUILDING ISE: FROM GENEVA TO BARCELONA AND SHAPING THE FUTURE OF THE AV INDUSTRY

Interview with Michael Blackman, Managing Director of CTS

Early Life and Background From Guyana to London: The Journey of Michael Blackman

Photo: Michael Blackman

– When and where were you born?

I was born in September 1958 in Guyana, South America. That's next to Brazil, below Venezuela. I left when I was six years old and moved to London, which is where I started my education and grew up. I stayed there until my first jobs, all of which were in the UK. Thirty-three years ago, I was headhunted to come and set up an event company in Germany, and I'm still here.

– Who were your parents?

My parents were both teachers. My father eventually became a computer programmer. Opportunities were limited in Guyana, so they decided to move to the UK. My mother later became a headmistress for many years, and her final role in schools was as an inspector of schools. My father became a data analyst. Sadly, both of them have passed away, but they had very successful careers and gave me the opportunity for a good education.

«ISE is not just a reflection of the market; it's now a platform for what's coming in the future».

– What was it like living in Guyana?

I have limited recollection. I had a very nice time. My parents left us with my grandmother for a couple of years while they got settled in the UK. We lived on the coast, next to the sea. My brother and I — he's older — had a wonderful childhood there. My memories of that time are very fond. I've been back to Guyana a few times recently: last year, five years ago, and 10 years ago. I've seen how the country has changed.

A lot of things remain the same as they were when I left over 60 years ago. But there are also significant improvements. The discovery of oil has led to substantial investments, and the country is changing, improving, and advancing.

– Did you experience racism while growing up in the UK, considering times were different back then?

Yes, I experienced some situations like that. But I think a lot depends on your attitude. I was brought up in a household where we were taught to be confident in ourselves and to project an aura that could prevent racism to some extent. There were definitely situations, but I never put them at the forefront of my life. I focus on my position and how to make the best out of life. For me, if someone wants to be a racist, then they're not someone I want to deal with. I can avoid those people.

– How were you integrated into life in the UK?

My mother was very forward-thinking. When we arrived, I was six years old and had what you'd recognize as a Caribbean accent. The first thing she did was arrange elocution lessons for my brother and me to help us "speak properly" for living in the UK. It certainly helped me in my career later on. We did a lot to blend in and adapt, and that was one of those steps.

– How did growing up in such a diverse South London neighborhood shape your experience?

The neighborhood we lived in was very mixed, so we didn't stand out. I grew up in South London, which was a very cosmopolitan area with immigrants from many different places. My schools were diverse, with mixed nationalities. Because of that, it wasn't a big issue — we weren't seen as "different."

– What was the football club close to this area?

Millwall and Crystal Palace were the closest ones. I must admit, at that time, I think the Millwall Club had a reputation for violence, so I was never really a big football fan. Have you ever seen the film Hooligan with Elijah Wood? It parodies exactly what was going on during that time.

«During that one week, we bring the world to Barcelona».

– Do you like football now?

I'm spoiled. I get invited to the VIP lounge at a lot of games, and it's an enjoyable way to watch football. I'm not an avid fan who goes to every game, but I enjoy attending with a group of people and watching a good match. If Bayern Munich is playing, I have to support them; otherwise, my family will disown me.

Photo: Michael Blackman

– What subjects did you like in school?

I always liked art, and I was always creative. At the very beginning, art, woodwork, and similar things were always fun. But I was also very technically minded. My school subjects were mostly on the mathematical side. I did pure and applied maths with statistics, chemistry, and biology, which I was always good at, and I also studied French and German.

– Did you study French or German in school?

Yes, my school was quite good like that. French was compulsory from the very beginning. After the second year of school, we had to choose another language. I had the choice between German and Latin, and I decided to learn German because, at the time, I wasn't sure what I could do with Latin. It was a grammar school in the UK, and they tended to focus on those kinds of things. A third language was compulsory.

– Was it a private school or a public school?

It was formerly a private school and later became a public school. It was started, I think, in the 1800s as the West Kent Grammar School. You might say that the aristocrats of the UK lived in West London and areas around there, while the nouveau riche were traders and merchants bringing goods in from overseas. The Docklands were where the trade occurred, but the merchants didn't want to live there, as it was seen as a poor and small area.

– What's the historical significance of Brockley and its evolution over the years?

Brockley was close enough and developed into a nouveau riche area for London. In the 18th century, many large houses were built there for merchants, traders, and new entrepreneurs. The school was originally built to educate their sons and was a private school at first. Later, during the time of what was then called the London County Council, they took over the school, turned it into a grammar school, and renamed it Brockley County Grammar School.

– As immigrant parents, was it difficult for your parents to afford private school?

It wasn't a private school when I attended. It was already a grammar school, so it was funded, and there was no need to pay for it. However, further education after school had to be paid for. My parents always said that as long as we wanted to be educated, they would finance it and support us to give us a future.

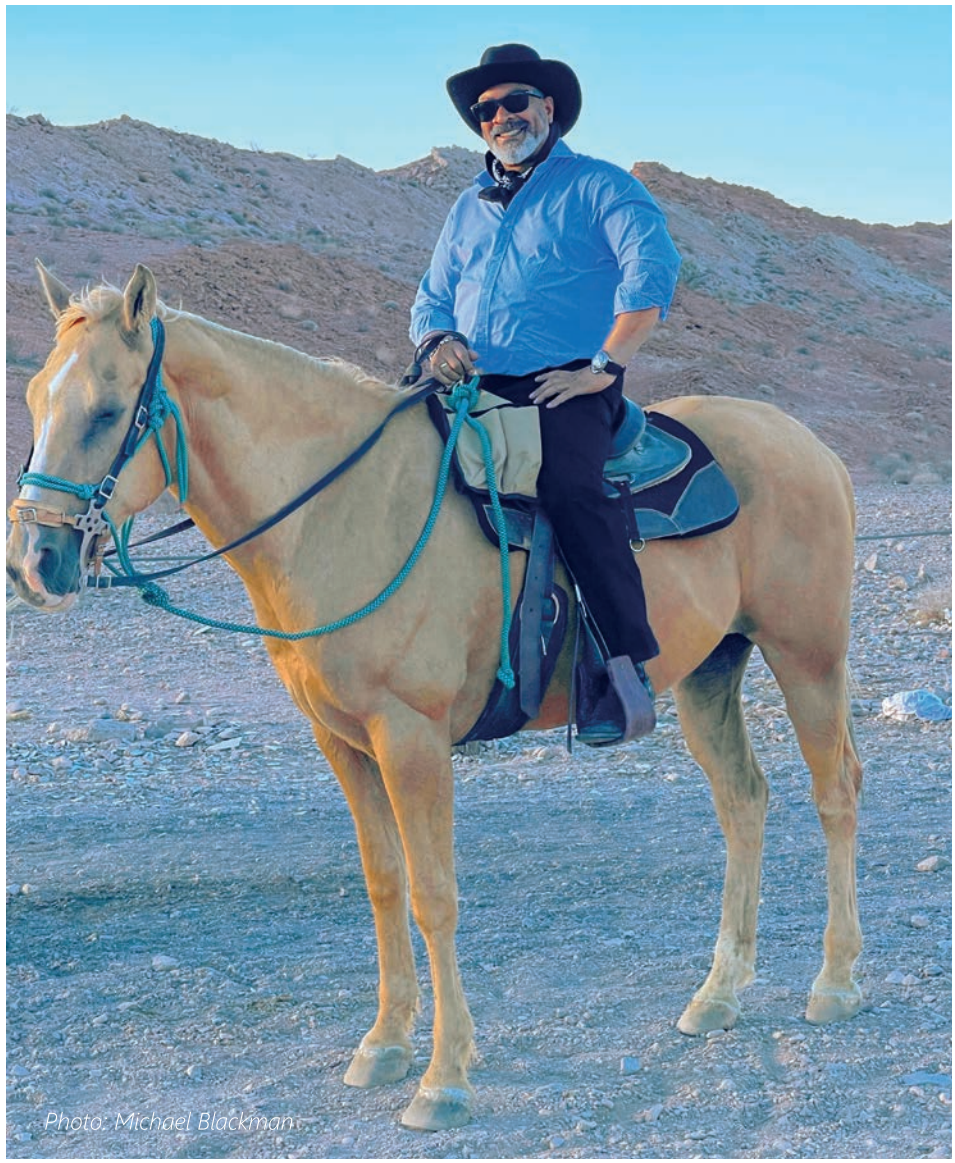


Photo: Michael Blackman

– Were you involved in any sporting activities while in school?

Actually, I was quite an all-rounder. I was in the school's first 15 for rugby and was very good at it, even playing at the county level. I was also strong in athletics, with my main distances being 400, 800, and 1500 meters.

– What role did sports play in your school years?

I excelled in the high jump as well and was a good all-around athlete. If the school needed someone for the 400-meter relay, I could make the team as the last man, being the fourth fastest runner. In the winters, I participated in cross-country running, primarily for training, which built my stamina. I enjoyed being athletic and involved in various sports.

Education and Career Beginnings

How Education and Early Career Choices Shaped Michael Blackman's Path

– Which university did you attend?

I originally had a place at university to study accounting. I chose accounting because two of my favorite subjects were maths and economics, and I felt accounting was a logical career path combining both. However, before starting, the university suggested I enroll in what was called a "sandwich course" at the time. It involved two years of study, one year of internship, and a final year of study. They recommended that I write to companies to set up my internship.

– How did your first job experiences shape your career choices?

After writing more than 100 letters by hand and receiving only about a dozen replies, I was offered three positions. One of the companies suggested I work with them over the summer to gain experience. That summer turned into a few more months, and during that time, I realized that this wasn't the career I wanted to pursue.

– What led you to pivot from university to a career in marketing and sales?

So, I canceled my place at university, deciding I wasn't going to spend four years studying for a career that didn't interest me. I explored various paths and eventually landed a job at the Financial Times in the advertising department. While working there, I decided to get qualifications, so I studied for a diploma in international, industrial, and consumer advertising and marketing. I realized that marketing would be the right direction for me. Shortly after, I developed an interest in sales.

– What did you decide to do after leaving the Financial Times?

I left the Financial Times to join VNU Publications, where I sold advertising for computer magazines and received all my sales training. I became very successful with them. After a short time, headhunters were calling me every evening, trying to coax me into new roles.

Transition to the AV Industry

From Advertising to AV: Michael Blackman's Career Pivot

– How did headhunters influence your career path?

Eventually, I joined Andrew Montgomery, which was one of the biggest event organizers in the UK at the time. I was tasked with developing their technology sector. They had one computer show, the Personal Computer World Show. I built that into the largest-attended computer show in the UK.

– What was your position at this company?

When I joined, I started as a sales manager. By the time I left, I was the director of the UK company, the managing director of the German company, and the managing director of the French company.

– An impressive career progression — why did you decide to change jobs again?

I was headhunted again, this time by IDG Publications out of Framingham, Massachusetts. They wanted someone to help develop their technology shows, specifically their computer shows. They offered me the position of managing director in Germany. It was a very good offer, so I decided to join them in 1989.

– Why did you decide to change jobs again?

In 1991, I left IDG and set up my own consulting business. I ran that business from 1992 until 2003. That's when I was approached by the associations to set up ISE.

«Advocacy is about ensuring the AV industry is recognized as its own sector, distinct from IT».

– You mentioned setting up your own consulting business. What niche was this?

My consulting business focused on event management and marketing, with a strong emphasis on technology.

Full story on the web-site TFT1957.com

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CONCEAL


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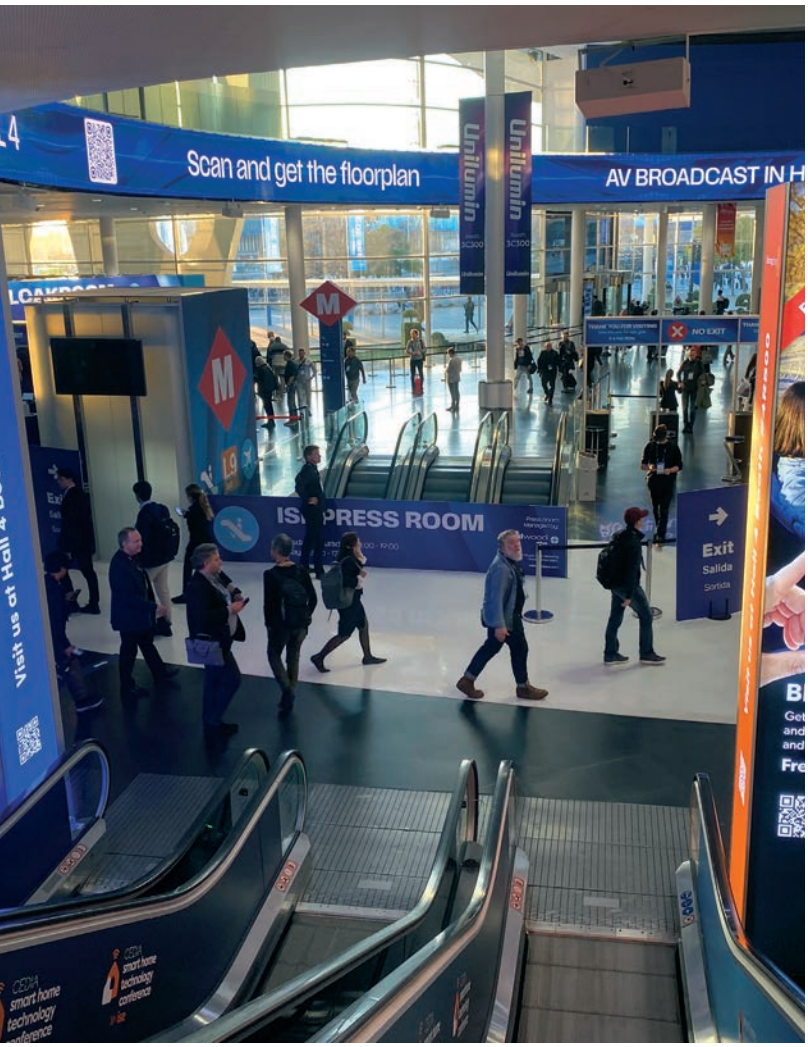
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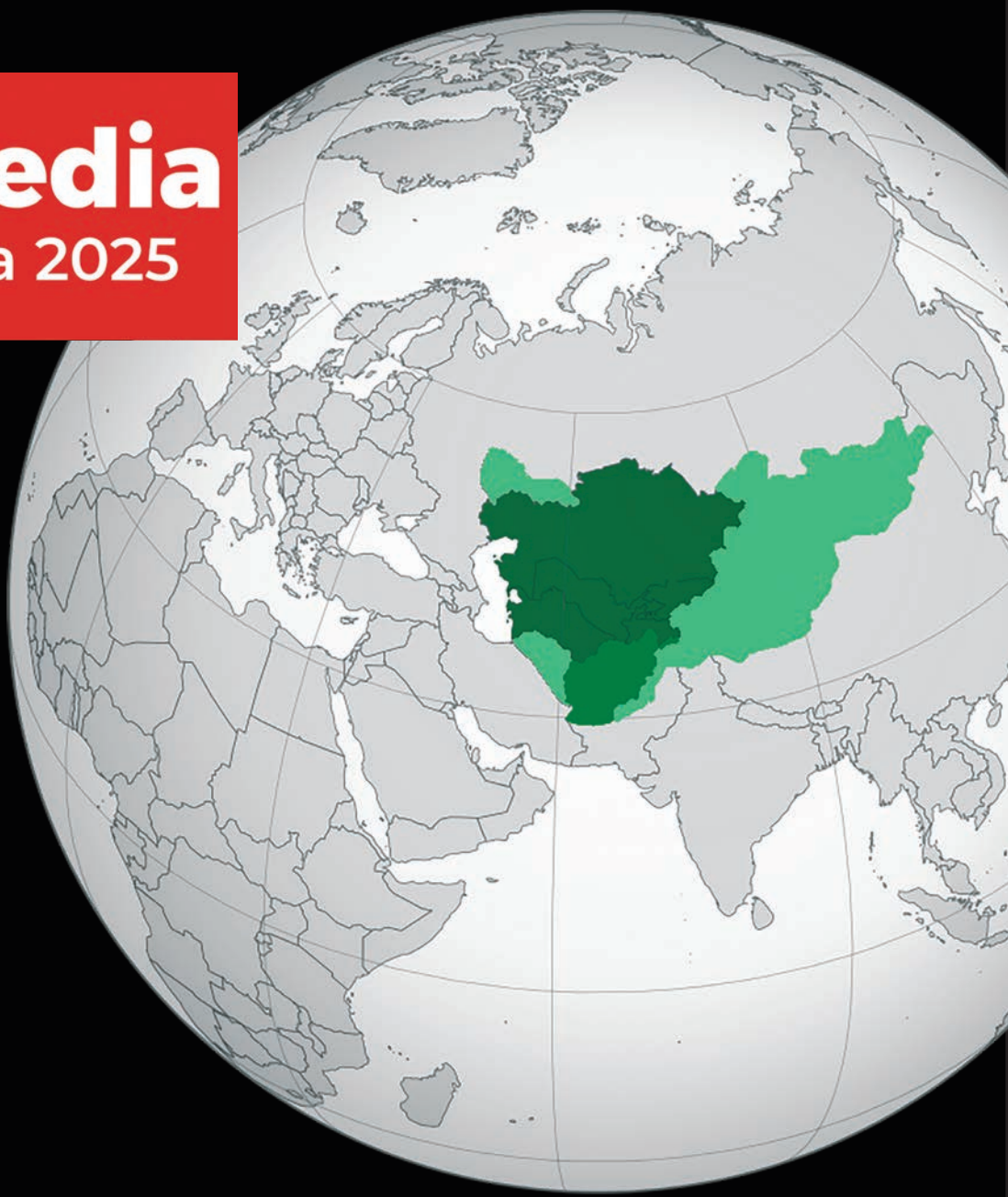

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