

Video Compression Emerges as a Strategic Lever for Managing AI Growth, Energy Consumption and Infrastructure Costs

BEAVERTON, OR, UNITED STATES, October 1, 2026 /EINPresswire.com/ -- The accelerating growth of AI-generated content, higher-resolution media, immersive applications and enterprise video communications is forcing organizations to reconsider how they manage one of the largest contributors to global network traffic. Rather than treating video compression as a narrow technical function, enterprise technology leaders are increasingly evaluating it as a strategic lever for controlling infrastructure costs, improving energy efficiency and supporting long-term digital growth.

Those issues were the focus of a recent BizTechReports executive vidcast featuring Eric Deniau, Senior Vice President of Research and Development at VITEC, and

Aytac Biber, Director of Product Management at Qualcomm and a board member of the Media Coding Industry Forum (MC-IF). Both executives argued that next-generation video compression technologies should be viewed as part of a broader strategy for improving the efficiency, scalability and sustainability of the entire video ecosystem.

The trend reflects a broader shift occurring across the digital economy. Video volumes continue to expand as smartphones become more capable, enterprises increase their use of collaboration platforms, and artificial intelligence generates new forms of visual content. Each increase in resolution, frame rate and application complexity adds pressure across storage, transport and processing infrastructure while driving higher operational costs and energy consumption.

The discussion focused specifically on Versatile Video Coding (VVC), the successor to High Efficiency Video Coding (HEVC). According to Biber, VVC can reduce bitrates by up to 50% over



Eric Deniau, VITEC

HEVC while keeping the same video quality. Although migrating to a new codec requires careful planning and ecosystem support, he said the operational savings increasingly strengthen the business case for adoption.

Rising Video Demand Is Expanding Infrastructure Challenges

Video technology has evolved far beyond its origins in broadcast media and entertainment. Today it supports enterprise collaboration, healthcare, education, digital signage, surveillance and industrial operations, making continued growth virtually inevitable.

Biber observed that video has become the dominant source of network traffic worldwide and argued that reducing video consumption itself is neither practical nor desirable. Instead, he said the industry must improve efficiency across production, encoding, transport, storage, decoding and playback while preserving the quality of the user experience. The objective, he said, is to reduce energy consumption throughout the video lifecycle without limiting innovation or demand.

Deniau echoed that perspective, noting that organizations now rely on video across virtually every industry and application. As video volumes continue growing, he said the industry's challenge is no longer whether video will become more pervasive, but how that growth can remain economically and environmentally sustainable. He identified codec innovation as one of the most practical opportunities to improve efficiency because compression influences every stage of the delivery chain, from storage and distribution to encoding, decoding and endpoint devices.

The executives also pointed to emerging technology trends that are accelerating infrastructure demands. AI-generated video, extended reality, immersive applications and increasingly capable consumer devices are all expanding the volume of video data that organizations must process and distribute. Biber noted that rapidly growing AI infrastructure and data center expansion are simultaneously increasing worldwide energy demand, making efficiency improvements increasingly valuable from both operational and financial perspectives.

Energy Efficiency Is Becoming a Business Metric



Aytac Biber, MC-IF

While sustainability initiatives have traditionally been associated with corporate responsibility programs, both executives argued that energy efficiency is increasingly becoming a measurable business objective.

Biber said improved compression directly reduces the amount of data transmitted across networks, lowering bandwidth requirements and reducing operational expenses for streaming providers, telecommunications companies and enterprise IT organizations. Although energy savings are not perfectly proportional to compression gains, transporting fewer bits requires less networking and processing capacity across digital infrastructure, creating measurable operational benefits.

Organizations are increasingly incorporating those efficiencies into total cost of ownership calculations. According to Deniau, energy consumption is becoming a more important consideration during procurement decisions and large-scale technology deployments as organizations seek to control long-term operating expenses. He also observed that evolving regulatory requirements surrounding sustainability reporting are reinforcing those economic drivers.

He described VITEC's GreenPEG initiative as an example of how sustainability considerations can extend beyond individual products. Rather than focusing solely on manufacturing, he said the initiative examines product design, supply chains, logistics and customer deployments, with particular attention to reducing the environmental impact that occurs throughout a product's operational life. Internal assessments, he added, indicate that the majority of a video's environmental footprint is generated while products are actively encoding, transporting and displaying video rather than during manufacturing itself.

Those realities are changing executive priorities. Energy efficiency is evolving beyond compliance into a product characteristic that increasingly influences purchasing decisions, board-level discussions and long-term infrastructure planning.

Codec Innovation Supports a Broader Optimization Strategy

Despite the attention surrounding next-generation compression technologies, both executives cautioned that codec improvements alone will not solve the industry's infrastructure challenges.

Deniau argued that organizations should pursue end-to-end optimization across encoding, transport, hardware implementation, decoding, display technologies and lifecycle management. Hardware acceleration, he said, represents another important opportunity because efficient silicon implementations can reduce energy consumption beyond the gains achieved through compression algorithms alone.

Biber acknowledged that migrating from one codec generation to another remains a significant

undertaking. Organizations must evaluate software readiness, hardware availability, installed device bases and implementation timelines before making the transition. Nevertheless, he argued that growing bandwidth requirements, increasing energy costs and expanding video demand are steadily strengthening the business rationale for adopting more efficient compression technologies.

Looking ahead, Biber recommended that technology leaders adopt measurement-driven frameworks when evaluating future video strategies. Rather than concentrating solely on compression performance, organizations should assess quality of experience alongside bandwidth consumption, energy usage and overall carbon impact.

Deniau concluded that the continued expansion of video across enterprise and consumer markets is effectively assured. The more significant question, he said, is whether the industry can support that growth sustainably through coordinated improvements across compression technologies, hardware design and end-to-end infrastructure optimization. As AI-generated content, immersive media and digital communications continue expanding, organizations that improve the efficiency of the entire video lifecycle will be better positioned to balance operational performance with long-term infrastructure demands in a profitable – and sustainable – manner.

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