Lawo IP-Based Infrastructure for HuskerVision

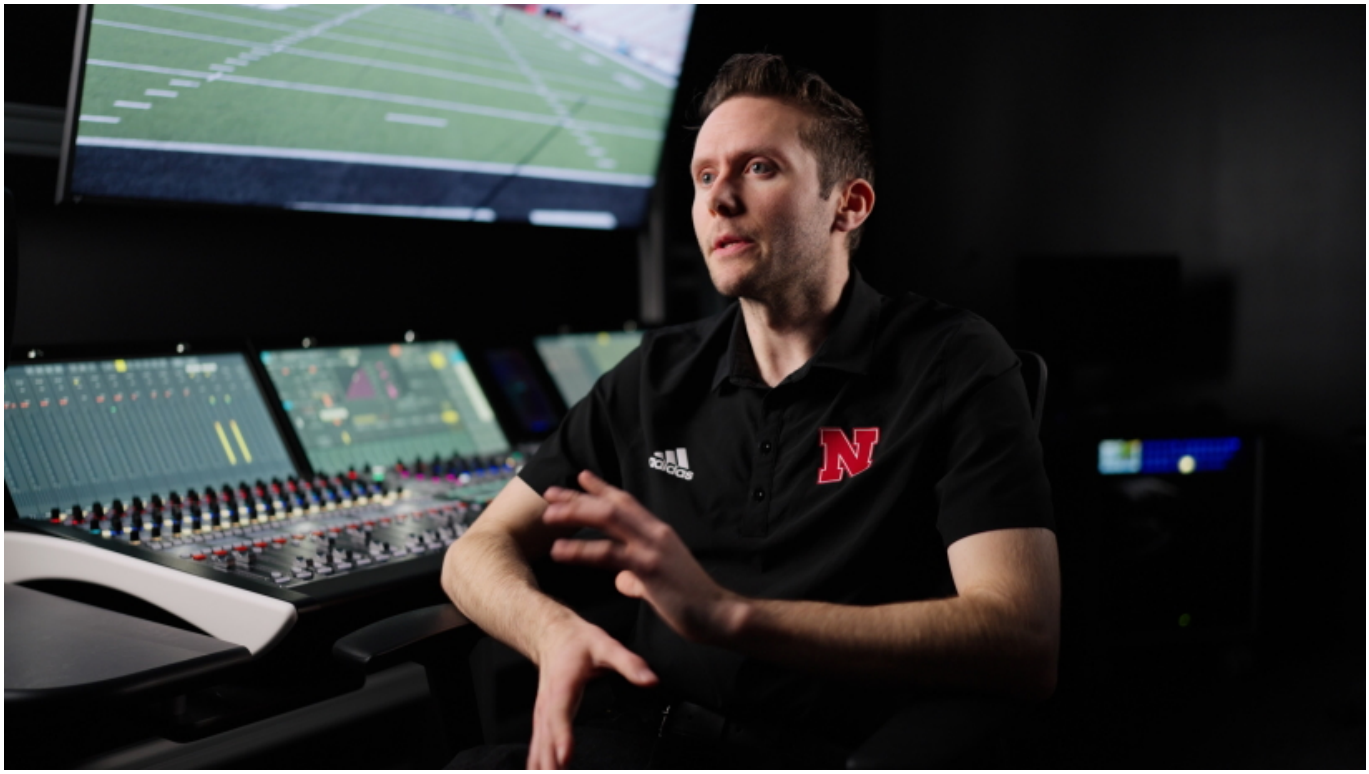
Pictures: HuskerVision, Lawo

The University of Nebraska’s HuskerVision has completed the second phase of a multi-year modernization effort with the deployment of a comprehensive ST 2110-based video infrastructure powered by Lawo. Following an audio-first transformation in 2023 - HuskerVision’s initial step into IP workflows - the new video implementation brings all major athletic venues into a unified, software-based production environment. The result is a campus-wide media fabric capable of handling simultaneous shows from multiple control rooms, while giving student operators access to the same tools used in top-tier broadcast facilities.

The earlier audio upgrade had introduced HuskerVision to Lawo’s IP ecosystem through mc²56 production consoles, A__UHD Core processing, A__stage 64 and A__mic 8 interfaces, and HOME Management for routing and orchestration. “Doing audio first was key,” recalls recently retired Chief Engineer Scott Guthrie. “We learned timing, stream management, PTP, device discovery - all the fundamentals. When it came time to roll out video, everyone was ready.”

That readiness was crucial as the university moved towards their SMPTE ST 2110 implementation designed and integrated by BeckTV. With Nebraska’s athletic venues spread across a wide geographic area - including Memorial Stadium, Hawks Championship Center, the Devaney Center, Pinnacle Bank Arena, Haymarket Park, and the Dillon tennis and Hibner soccer complexes - the goal was to bring all

locations together through a single IP backbone feeding three co-located control rooms inside Memorial Stadium. This allowed operational consolidation while dramatically boosting routing flexibility.



At the core of the new video infrastructure is Lawo’s .edge platform, used both as a high-density gateway and as a full IP processing node. Multiple .edge frames provide 3G-SDI and 12G-SDI ingest, while native ST 2110 connectivity and quad-25GbE interfaces feed the production fabric. The system’s ability to present SDI inputs as network “proxies” gives HuskerVision high scalability with minimal bandwidth overhead. “We can bring in signals from any venue - whether five cameras from volleyball or a full football package - and everything just shows up in the fabric,” says Director of Technology Garrett Hill (pictured above). “Routing video or audio essences independently is as easy as moving blocks around.”

One of the most operationally transformative areas is the truck dock at Memorial Stadium. Using .edge for video and A__stage64 for audio, HuskerVision can now exchange 24×24 bidirectional signals with national broadcast trucks, accommodating 12G-SDI, HDR, SDR and ST 2110 feeds without additional hardware. “Trucks get whatever flavor they want,” says Guthrie. “Up, down, HDR, SDR - it’s all handled right there in the IP edge.” Hill notes that the increase in available I/O and native processing “has completely changed how we interact with visiting crews.”

Workflows inside the control rooms benefit heavily from Lawo’s HOME Apps, running on COTS servers. The HOME Multiviewer, combined with theWall layout builder, enables dynamic, venue-specific monitoring setups that can be reconfigured in seconds. Meanwhile, the HOME UDX app provides on-demand up/down/cross

conversion directly in the network, reducing the need for traditional baseband converters. BeckTV Senior Engineer and Nebraska alumnus Brock Raum describes this flexibility as the project’s defining characteristic: “From season to season your shows change - and sometimes just from sport to sport. You might have soccer in one control room one day and football in another. With HOME Apps you shut down the tools you don’t need and spin up the ones you do. We’ve played with the webRTC app, downstream keying, UDX - you name it. The flexibility of using COTS hardware with the HOME App system is the highlight of the whole solution. If I need an app for a set of shows, I use FLEX credits. When I don’t, I shut it down and reuse those credits for something else.”

All workflows - video routing, tally, device control and multiviewer changes - are orchestrated through Lawo VSM, which gives operators a single, intuitive control layer across the multi-venue environment. According to Guthrie, “VSM lets us go from a big-screen volleyball show to a press-conference recording setup with one or two clicks. In a schedule where events overlap constantly, that’s huge.”

Because HuskerVision relies heavily on student operators, the accessibility of the system was essential. Seven full-time staff oversee a large student team who are involved in every aspect of the productions. Raum says, “Students are doing real engineering tasks now. They’re learning on the same tools used in the broadcast trucks.” Guthrie adds, “They learn the backend - how to modify layouts, manage essences, fix routes. And they get it.” Hill emphasizes the career value: “Training on the best gear helps them get jobs. Our students leave here ready for the industry.”

With the new IP backbone, HuskerVision can now scale productions, transport media content more efficiently between venues, and support multiple overlapping events with unprecedented ease. As Guthrie puts it, “Our business is making the fans happy. And with this system, we can do better than ever before.”

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