**Customer Story: VLAST**

**VLAST live streams virtual K-pop concerts with AJA Gear**

Virtual idols are poised to revolutionize entertainment, with [the market projected to top $4 billion by 2029](https://www.qyresearch.com/reports/2670242/virtual-idol-and-vtubers). Crafted with motion capture and game engine technology, these characters sing, dance, and interact with audiences online. [VLAST](https://vlast.com/), the South Korean entertainment agency and visual effects (VFX) technology company behind the virtual K-pop phenomenon PLAVE, is bringing the trend to live event productions. To meet enthusiastic fan demand for the musical group, VLAST has delivered two live PLAVE concerts, the most recent using NDI sources, streamed via the SRT protocol, and produced leveraging a suite of [AJA equipment](https://www.aja.com/).

**Breaking K-pop band records**

Since its debut, PLAVE has rapidly gained a fanbase, pioneering a new era of virtual idols. Their debut album, ‘ASTERUM: The Shape of Things to Come,’ released in March 2023, sold an impressive 203,000 copies. Their third mini album, ‘Caligo Pt.1,’ achieved impressive sales of 1,030,000 copies in the first week. Along with their established musical success, the group uses virtual identities to deliver stage performances that would have been impossible in real-world settings.

**Building an in-house NDI workflow**

To enhance the efficiency of its live concert production pipeline, which involves the use of high-performance creative and graphics workstations, VLAST opted for an NDI-based environment. With the NDI protocol enabling the transmission of video and audio sources over IP, VLAST has reduced cabling and simplified the process of sharing sources among operators. “Our NDI system has given us a robust and simplified means of distributing primary sources,” said VLAST CTO Lee Hyun-Woo.

Leveraging devices with NDI outputs, VLAST can now easily transmit PC signals in real time between various equipment without complex connections. Its infrastructure is designed to quickly and flexibly adapt to any live scenario and deliver a high production value that responds to various environments. “Regardless of the output method of each device we use, we can transmit and utilize signals from various devices with a single LAN cable, enhancing efficiency while improving the speed of transmission and reducing costs,” explained Hyun-Woo.

**Transmitting live concert productions with SRT**

VLAST first implemented its IP workflow for PLAVE's 'Hello, Asterum!’ ENCORE concerts, held last October at Seoul’s Chamsil Indoor Stadium. Leveraging an AJA [BRIDGE LIVE](https://www.google.com/search?client=safari&rls=en&q=bridge+live&ie=UTF-8&oe=UTF-8) IP video workflow solution, VLAST transmitted two 4K 30p sources to an on-site LED screen using public broadband networks secured with SRT to deliver the highest quality live stream. SRT enabled real-time transmission of high-quality video with low latency, allowing VLAST to maintain the same image quality for displays at the concert venue while significantly cutting costs compared to traditional fiber transmission.

“We needed to distribute both the main and PGM sources to the on-site LED screen to three different points,” noted Hyun-Woo. “We monitored the final output screen in the production studio and input the two sources into the primary and backup AJA BRIDGE LIVE for SRT transmission. Our aim was to minimize image degradation to ensure that full 4K picture quality was delivered.”

While all primary sources for the concert leveraged NDI, the final output equipment was configured based on 12G-SDI. The main and HDMI PGM sources from the production PC were input into AJA [HA5-12G](https://www.aja.com/products/ha5-12g) and [Hi5-12G](https://www.aja.com/products/hi5-12g) Mini-Converters to support conversion between 12G-SDI and HDMI 2.0. AJA [12G-AMA](https://www.aja.com/products/12g-ama) Mini-Converters facilitated analog audio embedding/disembedding. With these solutions in place, VLAST was able to minimize signal chain issues.

“AJA Mini-Converters provide reliable, high-quality signal conversion, excellent compatibility with various systems, and are easy to set up, making them ideal for use in concert settings,” added Hyun-Woo.

VLAST then connected the HDMI output to a PC monitor, and the SDI output was input to an AJA [KUMO 1616-12G](https://www.aja.com/products/kumo-1616-12g) SDI router for seamless distribution. Hyun-Woo chose KUMO, in part, for its intuitive web UI; he noted, “With the KUMO 1616-12G, installation and operation are simple; it’s so easy to configure multiple inputs and outputs. The router is well suited for a broad range of broadcast environments and offers exceptional stability.”

The VLAST team configured the router to distribute the main and PGM sources as 1x3, and the output of the router was input to the main/PGM broadcast monitor and a primary/backup AJA [BRIDGE LIVE](https://www.aja.com/products/bridge-live) for SRT transmission. BRIDGE LIVE simultaneously encoded two channels of 4K 30p sources in SRT, and a second unit performed SRT decoding at the concert site to transmit the main and PGM sources to the LED screen.

“Implementing BRIDGE LIVE has significantly transformed our broadcasting approach. We can easily remotely control the device through its web UI, which is so helpful. The most notable change is a substantial reduction in cost; we've been able to save a huge amount,” said Hyun-Woo. “Additionally, BRIDGE LIVE has enabled us to transmit HD video with low latency, resulting in far smoother, more stable broadcasts. Consequently, we can now deliver higher-quality concerts with an immersive experience, which is what our audience has come to expect.”

**Virtual idols play beyond borders**

VLAST is primarily using its NDI and SRT workflow to live stream a variety of content and events on YouTube. Beyond that, the virtual idol pioneers plan to use SRT transmission to take their virtual K-pop stars to an even wider audience with an expanded range of content. Hyun-Woo concluded, “By approaching technology and business with fresh eyes and new ideas, we can continue to differentiate ourselves through innovative content experiences and expand our presence in global entertainment.”

**About AJA BRIDGE LIVE**  
BRIDGE LIVE is a broadcast quality, low latency turnkey system for REMI, Synchronous Multi-Channel Video Contribution, Remote Collaboration, Direct to Audience Streaming, and Multi Bit Rate/Format Delivery. BRIDGE LIVE was developed as a collaboration between AJA and Comprimato to deliver the performance, reliability, and ease of use needed for critical live encode, decode, or transcode needs. [www.aja.com/bridge-live](http://www.aja.com/products/bridge-live)

**About AJA KUMO Routers**  
KUMO routers provide a convenient, dense routing solution in a lightweight, compact form factor for use in facilities, OB trucks, post suites, and more. Available in multiple connector densities, and in 3G-SDI and 12G-SDI options, KUMO is easy to update, configure, and control with optional Control Panels for quick physical access to source and destination routing, with convenient USB ports for IP configuration, plus all models offer integrated web browser access over the built-in Ethernet connection. KUMO 1616-12G and KUMO 3232-12G routers enable 4K and UltraHD routing on a single BNC for rates up to 12G.  <https://www.aja.com/family/routers>

**About AJA Video Systems**

Since 1993, AJA Video Systems has been a leading manufacturer of cutting-edge technology for the broadcast, cinema, proAV, and post production markets. The company develops a range of powerful, flexible video interface and conversion technologies, digital video recording solutions, and color management, streaming, and remote production tools. All AJA products are designed and manufactured at our facilities in Grass Valley, California, and sold through an extensive sales channel of resellers and systems integrators around the world. For further information, please see our website at [www.aja.com](http://www.aja.com/).

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