



Matrox MaeveX Streams Live Airport Traffic Footage to Off-Site Aviation Gallery

MaeveX H.264 encoders and decoders cost-effectively stream low-bandwidth, 1080p60 camera footage to educational air traffic control exhibit 2 km away

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*Matrox MaeveX
H.264 encoder and decoder*

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Miss Michelle Siu
Project Officer, Hong Kong Civil Aviation Department



Images courtesy of the Hong Kong Civil Aviation Department

The Hong Kong Civil Aviation Department (HKCAD) uses Matrox MaeveX H.264 encoder and decoder devices to stream live, low-bandwidth aircraft traffic footage 2 km (1.2 mi) from the Hong Kong International Airport (HKIA) to its Education Path aviation gallery.

Hong Kong Civil Aviation Department (HKCAD) visitors now share the same view as air traffic controllers, remotely observing departing and incoming aircrafts after deploying the Matrox MaeveX™ AV-over-IP H.264 encoder/decoder system. Streaming low-bandwidth, 1080p60 video from a camera in Hong Kong International Airport's ATC tower to its HKCAD Education Path aviation gallery 2 km (1.2 mi) away, MaeveX lets HKCAD visitors experience live, close-up footage as if they were one of the airport's air traffic controllers.

First-Class AV-over-IP

Located in HKCAD's headquarters, the Education Path aviation gallery is designed to showcase the functions and vision of the Civil Aviation Department, while promoting various activities within the civil aviation industry. The Education Path features a number of highly-engaging galleries, and HKCAD was interested in adding another to its collection with a "live" air traffic control (ATC) exhibit. The initiative required streaming high-quality, low-latency video feeds of the airport's aircraft activity between HKCAD's restricted ATC tower and the remote Education Path aviation gallery. It was also critical that this be achieved within the existing network infrastructure's 8Mbps of available bandwidth, while keeping the IT network administration satisfied with minimal network bandwidth usage.

A Low-Bandwidth, Low-Latency Alternative

Although some of the initially selected AV-over-IP platforms were capable of streaming the airport traffic activity, the content was often transmitted at bandwidth-taxing bit rates of 12Mbps or higher. As a result, video delivery and performance were impacted at the end point. Local IT solutions provider Amara International Ltd. recommended an alternative video distribution option: Matrox MaeveX H.264 encoders & decoders. These cost-effective devices can stream up to Full HD 1080p60 video and audio at low, adjustable bit rates between 100Kbps and 25Mbps.

HKCAD wanted to distribute content over their existing IP network using standard, commercial-off-the-shelf network cabling and equipment. MaeveX AV-over-IP devices not only meet that condition with their open H.264 encoding, but Amara also demonstrated how the bundled Matrox PowerStream™ software provides a wide set of control options—including easy remote device management, stream switching and streaming/recording parameter adjustment, and, most importantly, bit-rate customization.



Maevex provides HKCAD headquarters with a camera view from the airport's air traffic control tower.

Cleared for Takeoff

HKCAD today uses MaeveX in their ATC tower to stream live aircraft traffic footage from a 1080p60 HD camera over their local access network (LAN) to a remote Epson® HD projector 2 km (1.2 mi) away. Through PowerStream, Amara was able to optimally set the bit-rate limit to a more resource-friendly 8Mbps, ensuring smooth and uninterrupted video delivery.

"After we configured PowerStream to the client's bandwidth specifications, video distribution became a matter of plug and play," said Jeff Lai, Sales Manager at Amara International Ltd. "It was clear from the start that MaeveX would be capable of streaming video across the existing infrastructure with minimal interruption, downtime and expense."

By delivering high-quality, low-bandwidth video content between the airport tower and Education Path aviation gallery, the new exhibition replicates the true, up-close air traffic controller experience HKCAD was looking for.

"Pristine image quality, low-bandwidth consumption, high stability...these are the qualities that make Matrox MaeveX a unique AV-over-IP solution," said Miss Michelle Siu, Project Officer at the Hong Kong Civil Aviation Department. "Matrox MaeveX was instrumental in helping us stream video over our existing IP network and we are very satisfied with the equipment's performance so far."

About MaeveX AV-over-IP H.264 Encoders/Decoders

Matrox MaeveX™ 5100 Series delivers excellent streaming quality at a fraction of the price of traditional encode/decode systems. MaeveX AV-over-IP solutions enable the extension of Full HD quality 1080p60 video and audio over standard IP networks with unicast and multicast support for digital signage, collaborative video walls, and many other applications. Bit rates are user-definable between 100Kbps and 25Mbps, enabling multiple streams on both 100Mb and 1000Mb standard networks. MaeveX H.264 encoders even allow for software-based decoding on non-MaeveX devices. MaeveX encoders can also function in record mode, allowing Full 1080p60 MP4 files to record to NAS or network-shared drives for storage of sensitive and important AV data. MaeveX units come bundled with Matrox PowerStream™ software, allowing for easy remote management of MaeveX devices and functionality. Contact Matrox Graphics to learn more.

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