



## Remote production between countries using the Internet

When Sweden did not qualify for the final in Men's Ice Hockey World Championships in Slovakia in spring 2019, Swedish NENT Group, hosting parts of the Swedish broadcasting rights, needed to move their commentators to the arena in Košice. Going from a fully equipped arena with pre-booked fiber connections using EBU, the next arena did not have equipment suiting the needs for NENT and Viasat. It became more difficult as the production for NENT was a remote production without any OB unit in Slovakia, only sending all signals back to Stockholm for processing.

A few days before the game, NENT booked an Internet connection from the local arena organization and hired XLinks from NEP Sweden, the supplier for all commentary equipment used by NENT Group. By sending down the smallest link, VideoXLink X2, it was possible for NENT to transmit and receive video signals directly, without any pre-booked fiber connections. Because of the size of the X2, it could be easily packed in a camera bag and was flown as cabin luggage to Slovakia without any issues.

### Short facts

**Used equipment:** 2 pcs VideoXLink X2  
**Client:** NEP Sweden/NENT Group  
**Date:** May 2019

### Easy transport and setup

When the technician arrived at the arena in Košice, the connection to NENT MCR Stockholm was already established between the MCR and the NEP Sweden Media hub, where one of their XLinks was located. The commentary position in Košice was ready for broadcast in a very short time. As soon as the technician connected the X2 link to the Internet connection, it immediately created a fully duplex video transmission between the two countries. By using the commentary unit provided by the local organization, an analog mix output of the two commentators was embedded in the camera connected to the X2 link. By using the embedded audio this way, it was guaranteed to always be fully synchronized with the video. The commentary unit itself only acted as a

transceiver for intercom from/to the arena, except for the mixing of the commentators.

During the hours the X2 link was connected, the signal was not disturbed at any time, no matter using an ordinary Internet connection. The round-trip delay between Sweden and Slovakia was around one second, using extended packet buffers as precaution in case of errors during the transmission. During the match, the audio from the commentary was used as the primary audio, not only for the pre-game sequences, using the commentary camera. This solution integrated very well with the remote production plan applied by NENT. The commentators themselves were also able to see the program feed directly from Stockholm without long delays.

*VideoXLink Europe develops video equipment, revolutionizing the way television is being produced. Our products work over Internet as well as closed networks, all with ultra-low latency. We see it as the future of broadcasting.*

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