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Comms Go IP at Torino

NBC expands use of VoIP to communicate among crews, venues

by Jess Heimlich

TORINO, ITALY

To cover the Winter Olympics in Torino, NBC made extensive use of Ethernet connectivity and Internet Protocol between the IBC, venues and stateside locations.

One of the most significant changes took place within the core of NBC's communications system, (aka "RIB G"), which occupied 20 racks in the IBC. Here, Telex' RVON (RTS Voice Over Network) VoIP product was integrated into the system for the first time at an Olympics. Audio and data traveled over RJ-45 cable, in a manner similar to Internet connectivity.

The heart of the system was a Telex 4 frame, 480-port ADAM intercom. RVON technology was integrated into the system using 15 RVON-8 cards, 23 RVON-I/Os (standalone units) and five KP32-RVON-1s. The RVON-8 cards reside within the ADAM frame and operate in the digital realm, while the RVON I/Os are analog in and out. The KP-32 RVON 1 is a KP32 panel with an Ethernet daughter board.

More than 15 venues, including "NBC Nightly News," "The Tonight Show," USA, MSNBC, CNBC, Telemundo, and the NBC network in New York and Burbank were all connected via RVON to the IBC in Torino. A total of 255 KP-32 key panels were used throughout Torino, plus another 20 to 30 stateside.

Communications between the venues and the IBC included both key panels and 4-wire circuits traveling over RVON. Additionally, one hard-line 4-wire circuit was installed at each venue as a backup. The RVONs also allowed every venue intercom to be remotely accessible for programming and monitoring through the RVON's built-in RS-232 pass through serial ports. Trunking audio and data from the figure skating venue was carried over the RVON to the IBC, as well as IFB interrupts.

Sean McKinnon, Craig Slayton, Chuck Roberts and author Jess Heimlich made up the daytime comms team. The overnight team (not pictured) included Bob Gilmartin and Jeff Baker.

IFB IN TORINO

For years, NBC had used the RAD Kilomux System to communicate with the remote key panels located at the venues and to trigger their remote IFB interrupt system. This method worked, but required extensive set up time and tweaking. Typically, an install at each venue took up to three hours using this method. Using the RVONs, setup time was cut by about 75 percent.

AZEdit, the software that controls the intercom, incorporates a Boolean type programmable scripting known as UPL (User Programming Logic). Using UPLs we were able to trigger GPIs on the IBC RVON cards. This data was also transmitted to the venue RVONs. At the venue end, a UPL statement was written which "saw" the GPI and told the local intercom to interrupt the IFB and replace it with the audio from, for example, Chairman of NBC Sports and Olympics Dick Ebersol's intercom, located in the IBC. Venue production personnel also had the ability to interrupt these venue IFBs.

At each venue, a 3-LED indicator in front of the production team was mounted for visual indication of IBC interrupts. Again, all of the audio and signaling data to accomplish this was carried through the 1 RU RVON I/O.

One of the more unusual venues at the Olympics involved the sport of curling. Due to the nature of the event, curling aired either through control rooms in New Jersey

or the IBC. Two RVON I/Os were installed and connected at the venue: one to New Jersey and the other to the IBC.

The Torino producer had a single KP-32 while the tech manager used two KP-32 panels—one connected to each location, allowing him to coordinate these changes. The stage managers and cameramen communicated over RVON 4-wires. These circuits were connected via a switchbox, which in turn routed communications from the corresponding control room and allowed instantaneous changeovers.

Ethernet Master Controllers, Telex's newest addition to its product line, also offered increased flexibility for communications at the Olympics. These allow up to 32 users to connect to the main ADAM frame. The latest version of AZEdit software includes password protection and a restriction editor. This restriction editor allows multiple users limited access to only the portions of the intercom that directly affect their show.

With any event of this size, contingency plans were in place if the IBC had to be evacuated, however Ethernet Master Controllers enabled us to control the IBC intercom from any venue or remote location.

A system with this degree of flexibility and connectivity becomes a complex and integral part of the production. The people involved also were vital. Telex Support was provided by Chuck Roberts. Sean McKinnon of Kerr Vayne Systems in Toronto was our lead programmer. Craig Slayton, the original designer of the RIB, was responsible for integrating the Host-provided 4-wire and telecommunications. Tony Kremer installed all venue integration with the aid of Chuck Roberts. Bob Gilmartin and Jeff Baker took the overnight helm, handling transmission back to New York and Burbank. All stateside communications were under the watchful eyes of NBC network's communications gurus Bob Streeter and Chris Papas in New York. ■

Jess Heimlich of Digital Communications was project manager for communications in Torino.