

# KVM in Broadcast: A Success Story

**Then:**

Before KVM, on-site camera crews filmed events, then manually carried films back to the broadcast studio to process.

**Now:**

Broadcasters beam video from a live event to the broadcast control room and on to your living room using virtualized servers, accessed by IP-based KVM systems.



## 100 Years of Broadcast and the Role of KVM

**1920s-1950s**

Broadcast for Everybody!



First TV broadcast by wire from New York to Washington, D.C.

**1927**

**1951**

Live TV sports broadcasts debut.

**1960s-1970s**

Era of "Big" Mainframe Computers

A computer for your pocket? That will have to wait another couple of decades.

**1969**

Broadcast brings us to the moon!

**YOU ARE HERE**

First images of the 1969 moon landing broadcast via Earth-orbiting satellites that transmitted back to NASA in Houston and, via further satellite links, to TV receiving centers around the world.

**1980s**

Era of "Personal Computers"

PCs in broadcast were not yet mainstream. Throughout the decade, the relatively small PCs and cathode-ray tube (CRT) displays quickly entered studios.

**1989**

First analog KVM Switch is born. The broadcast industry quickly realizes the potential of the new technology for connecting multiple users with multiple systems.



## Enter KVM Switching and Extension

**1990s-2000s**

Transition "Analog to Digital"

KVM technology is yet in its infancy but starts to quickly gain traction in broadcast. Switching sources was done using hotkeys over directly connected systems or CATx connections.

Maximum resolutions reached up to a stunning **1280 x 1024**



Fiber optics were yet to be adopted as a broadly used connection medium and copper cables brought signals up to **50m**

**2008**

**A new Star is born KVM over IP**

Gone are the days of limited scalability of KVM matrices. Send 4K video and USB as far as your network reaches & connect physical and virtual machines.

**2018**

**NAB 2018**

Black Box introduces **Emerald® 4K KVM-over-IP** 4K60 pixel-perfect KVM over IP  
**Boxilla® KVM Manager** Manages hundreds of endpoints and converges AV and IT networks.

**2010s +**  
Let's go virtual!

This time it's not physical: a move to virtual machine based infrastructure is on its way. Broadcast industry is shaken by major market disruptions including social media, streaming media, and higher resolutions.

# CELEBRATING 100 NAB SHOW

## Product Spotlight 2023: Award-Winning Emerald® DESKVUE

Create a personalized workspace to simultaneously monitor/interact with 16 physical, virtual, and cloud-based systems from up to four 4K/5K screens (maximum of one 5K screen).



**5.9 Billion**

Global KVM switch market by 2030

growing at a CAGR of 7.20% (Contrive Datum)

**7.06 Billion**

Global Broadcast Equipment Market by 2030

growing at a CAGR of 4.8% (Polaris)

