

Case Study

Golf Channel: (w)hole in one with KVM from G&D



A long time ago, probably within the 14th or 15th century, the first documented, modern Golf matches took place in Scotland. What started as a simple game has changed into a more and more professional sport within the last decades. Nowadays, golf is increasingly popular around the world. Therefore, tournaments and competitions are interesting for a huge number of golf enthusiasts and fans around the globe.

With an audience in 84 countries in 13 languages around the world, NBC's subsidiary is one of the most successful channels within this international market. Founded 20 years ago as the first 24-hour network devoted to a single sport, the channel has experienced tremendous growth from its initial launch to become a well-established, international channel. Broadcasting from major live events and tournaments around the world, exclusive interviews with popular players, daily shows that bring the latest news from the golf community to the fans, and country specific content produced by the Golf Channel is what the broadcaster delivers to its audience. To produce and to deliver this program to the recipients



around the world, the channel needs the women and men in front of the camera, the colleagues that prepare the content and that do the research about relevant and interesting themes and also the ones that edit the content and develop the program schedule. To succeed within a competitive media market, the Golf Channel team has to deliver the latest top stories about and from the scene and up-to-date content that is unique within the world of golf broadcasting.

However, all this would not be possible without the team working behind the scenes and with the technology this team is using for the different tasks. As an NBC affiliate, the Golf Channel is using high-end equipment and systems from well renowned companies which provide systems and solutions for the broadcasting industry.

G&D is therefore proud that the Golf Channel selected the ControlCenter-Digital matrix system and that the channel trusts into G&D's 30 year long history and experience as manufacturer of mission critical KVM systems.

Overview

Customer

Golf Channel is an American cable and satellite television network and multimedia company that is a part of the NBC Sports Group division of NBCUniversal. Exclusive partnerships with the world's top tours allow Golf Channel to feature more live golf coverage than all networks combined, as well as a programming schedule distinguished by golf's highest-quality news, instruction and original content. Co-founded by Arnold Palmer in 1995, Golf Channel's headquarters and studios are based in Orlando, Fla. Golf Channel is available in more than 200 million homes in 84 countries in 13 languages around the world through cable, satellite and wireless transmissions.

Challenges

- Expanding IT environment
- Separation of equipment and personnel

Products

KVM matrix & peripherals:

2x ControlCenter-Digital 288, DP HR-DH CPU & CON modules, DVI-CON & DVI-CPU, VGA-CPU-UC

KVM extenders:

DVI-Vision-CAT-AR (CPU & CON)

KVM accessoires:

Multipower12 & Device Carrier

Features: KVM Matrix-Grid™ function, Push-Get function, TradeSwitch function

Result and benefits

- Removing computers from workplaces for better working conditions
- Central system storage in dedicated server rooms
- Access to multiple platforms via the work places
- Easy operation of multiple systems at a time with CrossDisplay-Switching

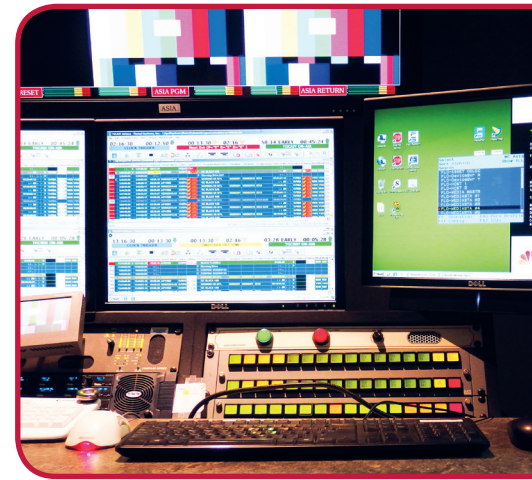
Meanwhile, the KVM matrix system has become a major backbone of the channel's studio infrastructure in Orlando/Florida. Around 200 computers and 50 operators which keep the Golf Channel Studios running 24 hours a day and 365 days per year are connected to the G&D systems. Currently the Golf Channel is operating two ControlCenter-Digital and each system does provide 288 Dynamic Ports (CCD288). The flexible port configuration and the system range enabled the Golf Channel engineers to implement the KVM system easily into their existing infrastructure.

Since the CCD288 requires only nine rack units both systems are installed together into a single rack. Saving rack space was critical for the Golf Channel since the expanding station needs any free rack space for its further IT expansion.

Another important feature is the modularity of the CCD system, e.g. that the switch card and the control card can be exchanged quickly and replaced with cold stand by cards in case a system failure might occur. With this option the Golf Channel is prepared even for a major system problem that has to be solved within minutes.

The operators are located within different locations such as Engineering, (Post-) Production and Editing.

The G&D system has been in operation since late 2014 and so far we have had no issues with the system or its components. It's running very stable and reliable. We indeed trust in G&D's technology. The operation and configuration is very simple. Our experienced team figured out easily how to work with the system and how to configure it.
- Brian Slusarz, Director Engineering



G&D's "DVI-CON" operator units allow access without any latency and instant switching to the different server systems which are connected to the matrix.

Since the modules do not require cooling by fan, the noise within the different studios is reduced to a minimum what delivers a quiet working environment for production, editing and engineering.

As the matrix does allow an individual configuration of operator workplaces and individual user rights management, the system administrators can manage and control the complete (KVM) infrastructure from their engineering room or from any of the DVI-CONs installed within the different operator workplaces.

A big feature of the G&D system is its simplicity - we actually did not need any help from G&D during the installation phase. What our team likes is the user-friendly web-interface, the low latency, the picture quality and the option to work on several operator modules with a single keyboard and mouse. Besides this, we often use the On Screen Display that allows to switch instantly between different sources.
- Andre Veenhuis, Engineering

Another useful feature is G&D's monitoring function since the administrators have to monitor and to maintain around 200 computers and 50 operator workplaces.





Within the server room the Golf Channel decided to use a mix of G&D's Device Carriers, MultiPower12 units for central power supply and individual power units within certain racks, depending on the available space within those.

The range of up to 140 m (310 ft) from the CPU modules to the matrix and from the matrix to the CON modules via CAT-x made the installation simple for the technicians – they had not to worry about the system range.

For its editing workplaces, the Golf Channel is using the brand new G&D DP-HR-DH modules. These modules transmit keyboard, mouse and 2 x video via one single CAT-x cable. Before using the DH modules, the channel was working with simple point-to-point extender systems which don't allow as much flexibility as the matrix solution.

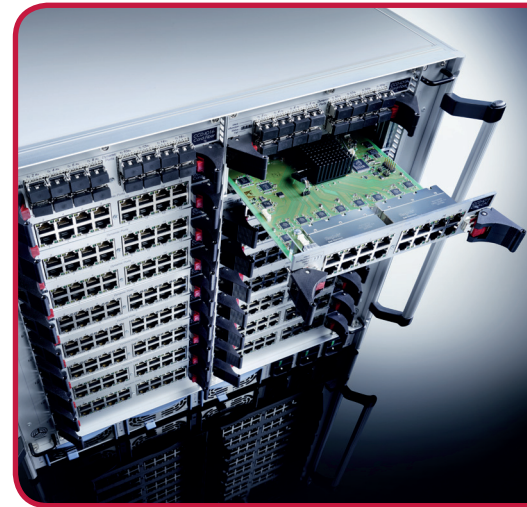
Since the integration into the KVM network the administrators can access all editing servers via the matrix system from the central engineering room and from all operator consoles if necessary. The operators working within different locations can switch between the available servers (the web interfaces allows the administrators to create user groups or individual users with certain user rights).

Components used within the Golf Channel KVM installation:

- CCD288 frame
- I/O Cards for CAT and fiber (mixed operation); each card does have 16 x Dynamic Ports for individual configuration
- DVI-CON and DP-HR-DH operator modules (for the transmission of keyboard, mouse and 2 x video via 1 x CAT-x cable)
- DVI-CPU, VGA-CPU-UC and DP HR-DH modules
- Device Carriers for 2, 3 or 12 G&D CPU modules
- MultiPower12 for central power supply of G&D CPU modules
- TradeSwitch function (allows easy and user friendly switching by mouse)
- Push-Get function (operators can distribute their screen content to other operators or receive screen content)
- KVM Matrix-Grid™ function

With the CCD systems and its components the Golf Channel can expand the KVM infrastructure within the next years and G&D's KVM Matrix-Grid™ function will help to add different matrix systems within different locations so the installation can turn into a big, virtual matrix system that is reliable, flexible and expandable.

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