How to choose an effective collaboration and presentation solution

While meetings are an essential part of any business, indeed of any collaborative human endeavour, they often just aren’t as effective as they could or should be.

One of the most significant reasons is that true collaboration in a meeting is hampered by the difficulty of sharing content on different personal devices that attendees bring. Such sharing today is typically limited to a presentation from a single device at any given time. Sharing information should not be just a one-to-many presentation. The best decisions are made when information is brought by various meeting attendees to be viewed together. This requires that the collaboration solution be capable of displaying more than one presentation at the same time.
Meeting time is often wasted passing control from one presenter to another. This can become even more time consuming if there is a need for the next presenter to adjust device and display settings merely to show their content. The traditional idea of passing the cable to present becomes even more difficult when content to be shared is on a smartphone or tablet, since various wired connection types are not typically available in a conference room. If some attendees are in a remote location, be it another country, another city, or another building, the difficulties of sharing content even in this most basic of scenarios are greatly magnified.

Thankfully, technology is now available to make meeting collaboration far more effective. Teams can truly share content, whatever their physical location, in a way that brings better visibility to the information, thereby greatly enhancing the decision-making process. However, not all solutions being offered today are equal. They differ in cost, complexity and, indeed, in their ability to deliver on their promises. Christie® Brio sets itself apart from other technology approaches as the most effective and easiest to use solution on the market.

An effective meeting collaboration solution must provide a number of essential capabilities. Rather than a feature-by-feature comparison, this paper will instead compare and contrast Christie Brio’s abilities to provide the most important capabilities. The associated IT requirements will also be discussed.
What is Christie Brio?

Brio is a network-enabled presentation and collaboration solution that makes it easy to simultaneously share and compare up to five presentations. After connection to the local area network, a few quick keystrokes or taps on your wired or wireless device allows you to share your audio, high definition video, whiteboards, and other information in a single room or with multiple people in multiple locations.

A wide variety of source devices are supported including PCs, Macs, and iOS and Android™ devices such as smartphones and tablets. You can wirelessly stream content from up to five devices through Ethernet or a wireless access point.

For maximum content detail, Christie Brio also supports up to two DVI-D connected displays of up to 4 Megapixels (WQXGA: 2500 x 1600) each. Using HID touch displays allows an intuitive interface with the system, including whiteboard and other capabilities.

Christie Brio will automatically tile sources as presentation content on a display with automatic adaptation to source aspect ratios and easy user control over the layout if desired.

Most other collaborative meeting solutions either can’t handle as many sources, don’t provide wired source inputs, can’t output to more than one display and/or limit the display resolution to no more than HD (1920 x 1080) or WUXGA (1920 x 1200), significantly limiting the amount of information that can be shared simultaneously. Web conferencing provides no multi-window presentation capability at all.

Christie Brio easily adapts to one display or two. Inputs are automatically arranged in a smooth transition on screen from a single input filling the entire screen to a quad split as additional sources are added.
Adding Brio to a network

A collaborative meeting solution should integrate easily into an organization’s existing IT structure and be compliant with in-house IT policies. Christie® Brio supports several different methods for connecting units to an internal network depending on purchase options.

Connecting Christie Brio to a network is similar to connecting a laptop. Each Brio ships with DHCP enabled for plug and play installation on a network. In the case where DHCP is not available, Brio has a default IP address. After one or two monitors are attached and the unit is powered on, the IP address of the unit will be displayed on the monitors. Because content transmission is handled on the local network, most modern networks will easily support the low bandwidth requirements of Christie Brio.

In addition to the standard Brio configuration described earlier, there are two other options. Using the PtP option, Christie Brio is not connected to the LAN and relies instead on a local wireless access point which is connected directly to the unit. This option requires additional hardware and a software license provided by Christie.

The second option is a multi-site license, which will be discussed in detail later.

Ease of use

Ideally, attendees should be able to walk into meetings with their own devices and start participating immediately without requiring a training session or a visit from the IT department beforehand. That’s exactly what Christie Brio provides. Content from devices is streamed over either the local area network or a dedicated wireless access point using standard protocols that are already a part of the devices’ operating system. Meeting attendees don’t have to install any special software or drivers on their devices to share presentations nor does Brio require the use of dongles.

Christie Brio works with industry-standard protocols including AirPlay (OSX and iOS devices), Network Projector (MS Windows®), and Miracast™ (Android™, Windows 8.1 and later). Christie Brio also offers its own application as an alternative to Network Projector for streaming content from Windows devices. The application may be downloaded from the Brio unit.

The Christie Brio is configured and managed using a standard HTML 5 web page. Any browser-enabled device on the network can access the page, so no special control panel is required.

Other collaborative meeting solutions require dongles, require the installation of third-party drivers and/or require custom application software or apps running on every source device, any or all of which can be significant barriers to collaborative participation. Web conferencing, of course, also requires a custom application to be installed.

Full support for audio and video

Great audio makes great video, and an effective collaborative meeting solution, particularly one that supports full multi-site participation, should handle the content audio as easily as it handles the video. Christie Brio includes two wired stereo-audio inputs and accepts streaming audio from OSX and iOS devices using AirPlay and from Android or Windows 8.1 and later devices using Miracast. Competing collaborative solutions either don’t support audio at all or support it only from streamed sources.

As important as audio is, images will always be the main focus of presentations. The Christie Brio can accept uncompressed video signals of up to 2500 x 1600 resolution on its DVI inputs at frame rates of up to 30 frames per second (fps) as well as HD signals at up to 60fps. (Display of the latter at the full input frame rate requires that the Brio output in HD resolution as well.)

The DVI inputs support HDCP, allowing display of all content from sources such as DVD and Blu-ray Disc™ players.

Other collaborative meeting solutions can’t accept video-signal resolutions as high as Christie Brio and some drop the frame rates far too low to display smooth motion when accepting multiple streams of video. None of the current offerings provide physical inputs for uncompressed video at all and, as a consequence, also provide no support for HDCP. Web conferencing solutions fare the worst in comparison, typically maxing out at 360p (640 x 360) resolution when displaying full-motion (30fps) video.
Integrated whiteboard

It’s one thing to see information in a meeting. It’s another thing to be able to work with it and to visibly annotate it in a collaborative way. By connecting Christie Brio to HID enabled touchscreen monitors that’s exactly what you can do. Using the monitors as a digital whiteboard, meeting participants can annotate imported still images, make notes or write/sketch. Any Brio connected to a meeting may contribute to the shared whiteboard. Any personal device connected to Brio may contribute to the whiteboard through the browser interface. Whiteboard drawings can be saved and retrieved locally at each site.

There is nothing to say about shared whiteboard support from other collaborative meeting solutions because they just don’t offer it.
Multi-site collaboration

In today’s global economy business activities are spread around the world, often making it a challenge to gather all stakeholders together for key decisions. With its ability to connect across the WANs and the Internet to share information between multiple sites, however far apart they may be, Christie® Brio provides an extremely effective solution.

Each Christie Brio unit may be attached via network to other units to create a shared meeting. Remote units are initially configured via known IP addresses in an address book. To start a meeting, one Brio acts as the host and sends an invitation to other selected Brios via the user interface. Remote units must accept the invitation before the units will be connected. Remote sites can also request to join an ongoing meeting or be invited to join by the meeting initiator. All sites that join the meeting are able to see and hear the same content as well as contribute to the whiteboard. When connected in a meeting the composited video and audio output(s) of the Christie Brio are streamed to remote sites using H.264 with a resolution of 1080p at 30fps. Any site can be permitted by the host to share information in that meeting.

The number of sites connected for a meeting is limited only by the available network bandwidth. Each Brio output streams at 2 Mbps. To connect to other Brios, each unit in the meeting must be enabled with a multi-site license from Christie.

For Brio to work effectively across different network locations; specific network ports must also be opened to maintain communication between the devices. For information regarding ports that must be opened on your router or firewall see: http://kb.vistasystems.net/KnowledgebaseArticle50062.aspx

Surprisingly, other meeting collaboration solutions don’t support true multi-site collaboration at all. This severely limits their usefulness. At best they behave much as web conferencing, which merely allows multiple viewers to see a single presentation.

IT security

A collaborative meeting solution should not expose an organization to security risks. Christie Brio not only allows strict control of who can join meetings from remote locations but all connections to personal devices can be password protected, as can a Brio’s UI. To prevent snooping, video streams between units are protected by Secure Real-time Transport Protocol (SRTP) and communication with Windows-based devices is encrypted by Remote Desktop Protocol (RDP). No information is sent from Christie Brio to a cloud-based service.

Isolating Brio connections

Christie Brio comes equipped with two network inputs. This allows the unit to sit on two different networks, for example a trusted corporate network and a public guest network. By connecting Brio to both networks, both trusted users and guests may present information in the same meeting without providing guests access to the general corporate network. The guest network must be a 24 bit subnet mask (255.255.255.0) to take full advantage of security with the two networks and keep IPs off of other subnets or VLANs.

For additional information on Christie Brio security, read the Creating secure Christie Brio connections whitepaper.

Conclusion

Meetings are essential but they don’t have to be ineffective. Easy and meaningful collaboration is the key. Today’s technology can enhance the sharing of information vital to the decision-making process in ways that were never before possible, regardless of the physical location of participants. By fulfilling all of the major requirements for a meeting collaboration solution for both business and education, Christie Brio is the most effective and easiest to use solution on the market.
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