_____ Conferencing

The right tool for the session

By Randy Cross

There are so many conferencing choices; Webinar, Videoconference, Podcast, Streaming, how can you decipher what they mean and determine which best suits your needs? Today we are pressed with too much work, too little time, shrinking budgets, higher demands for productivity and the need to be in a hundred places at once. To help in this crushing endeavor, technology has been developed across multiple platforms for use in conferencing sessions. For many users, the differences between the types of conferencing technologies are very vague. This can cause the mere mention of one type of technology to create expectations in the users based off understanding from a different technology altogether. Part of this confusion is caused by the fact that all these technologies have the same goal in mind; Allowing you to interact with others without actually physically being present. Another part of this confusion is caused by the blurring of lines or by using the same word to describe different features. Having an audio component is not necessarily VoIP (Voice over IP) enabled and having a video component is not necessarily videoconferencing. This document will try to identify the differences and give you some simple guidelines to help determine what technology is best for your session.

One of the major issues in dealing with this topic is the ambiguity of the terms and technologies associated with communication. In this document we are limiting the types to four major categories Videostreaming, Podcasting, Webconferencing and Videoconferencing. We are also not including the social media forms of conferencing (Facebook, Instant Messaging, Chat, etc.) in this discussion. These further muddy the waters and are generally not used as a primary means for disseminating classes or holding meetings.

To start off let's take a look at some basic fundamentals within these different base categories of communication technologies. Keep in mind that not all conferencing technology is built equally, even for those technologies that lie within the same major classification. Let us address the most basic or fundamental of questions; what are they and what should you pay attention to when choosing?

1) **Videostreaming**. Videostreaming is a technology that works best in a one-to-many environment, where there is one presenting element that is broadcasted to many. To do this, it captures an original event/person and pushes it out; either live or recorded, over the internet to anyone with the proper technology which is usually a simple viewer. Fundamentally it is strictly one-way and requires additional technology in order to have any audience participation. It can be free and open to anyone or one can make it password protected so that only select people can view the program. It is similar to TV in that the program comes to you and you can see and hear what is being presented but you have no input directly to what is presented on the screen. Also just like TV, the program can be watched by hundreds of people. This technology works well for training and announcements where return feedback is not required. Videostreaming is best for audio and video, however with the right equipment and bandwidth it can deliver content, such as PowerPoint and excel, at high-resolution.

2) **Podcasting** or **P**ersonal **o**n **d**emand broad**cast**. As with Videostreaming, Podcasting is a one way communication tool that requires additional technology in order for the end-user to see or hear the podcast. As well, it works best in a one-to-many environment. The technology is primarily audio and video, or audio over slides, where an event/person is captured and distributed via the internet. One major difference between Videostreaming and Podcasting, however, is the delivery and receiving mechanism. Podcasts are generally 'subscribed' to and are usually part of an RSS (Really Simple Syndication) feed or news service. The receiver uses special 'Podcatcher' software, such as Juice or gPodder, to download the program for playback on their computer or portable player. Podcasts are generally seen as packaged programs that are downloadable for play on-demand at the receiver's convenience. One example of this method is often seen in libraries or museums where they check out personal devices loaded with a Podcast to be used as a guided tour.

3) **Webconferencing**. This technology leverages the internet to take a presentation, meeting, class or training session and make it available to all participants over the internet in a more interactive environment. Out of all the basic categories described, Webconferencing has the most varied features because it is set with many presentation styles all under the auspices of being the same basic technology. There are interoperability issues because webconferencing requires that all locations use the same version of

webconferencing tool within an event. Webconferencing is best described as a one-to-one-to-many technology because it is designed for each participant to receive/transmit the conference directly from their computer and it has the capability to connect multiple computers to the same event. The primary interaction methods are audio, document sharing and text chat within the webconference environment. Resolution for content is very high which allows for fine line graphs and drawings to be transmitted. Most webconferencing systems have limited audio echo cancellation, which can generally be compensated for if each participant uses headphones as the local speakers. However, some of the variations on audio echo cancellation should be seriously considered before deciding whether or not to use this technology for your event. Audio is provided directly into the conference via the webconferencing system or by telephone using a phone conference bridge.

Most versions have an area for the delivery of content and allow you to preload content. Most systems also allow a presenter to show content through desktop or application sharing. This means presenters have the ability to show content using any application without having to preload that content into the system. How a webconferencing system handles preloaded versus shared content may significantly differ at the remote receiving locations. Testing what the far site would see in advance is highly recommended when using this technology. You also need to know if you are actually sharing your content or merely showing your content. Not all versions of webconferencing are really live/collaborative sharing. Some versions are truly collaborative, allowing a presenter to give control to another participant allowing them to manipulate, edit, or change, the original content, while others simply show the content to remote locations. The difference between showing and collaborative sharing can be demonstrated when we consider that some users convert the content to slides, which makes content available to all locations – however, in this mode, manipulation is strictly reserved for the originator. Although you're sharing an application from your computer, it is not truly live at the remote sites where the content is received as a fast series of still images.

Some systems use video and some do not and the capabilities and resolution of the video is as varied as any other feature set. For most webconferencing systems, video is secondary to the delivery of audio and content. Because of this it generally does not have as high a quality video image broadcasted as a videoconferencing system, which will be discussed in the next section. Knowing

what you want to do, and the capabilities of the version you have access to, is extremely important for a successful Webconferencing experience.

4) **Videoconferencing**. Not to be confused with video chat, Skype, or webconferencing, videoconferencing refers to a higher quality two-way interactive audio and video system that uses either the internet or specially configured telephone lines. Videoconferencing uses complete systems that include a TV, camera and microphone and can be from a very simple portable system for small groups to elaborate room systems with multiple TVs, cameras, and microphones. This is a one-to-one, one-to-many, many-to-many technology. Think of it as a phone conference with body language. Multiple systems can be combined into a single event with all locations hearing and seeing real-time, high-quality, audio and video from all locations. As with Webconferencing, there are many features available within the videoconferencing environment. However, the basics are standard pretty much across the board. All systems allow for smooth motion video (standard or high-definition based on the system) and real-time audio synced with the video signal. Most, but not all, systems allow for some type of content sharing in a dual-channel mode. This allows the video signal, or 'people' channel to be separate from the 'content' channel, providing two separate images to the origination and receiving sites. Not to be mistaken for true collaboration, this is higher quality image and can only be manipulated by the originating location.

   Desktop videoconferencing is the use of specialized high-end software on a computer to allow it to communicate with standard videoconferencing systems. Often utilizing the same webcams and microphones as used for Skype or video messenger, a desktop videoconferencing system requires higher connectivity rates and processing power to mimic the performance of a traditional dedicated system. Also because of these higher demands, multi-tasking on the computer being used for the videoconference, such as checking email or chatting, have a large impact on the performance in the videoconference. This often leads to freezing video, intermittent audio and even complete lock up of the computer. When conferencing over the internet both traditional and desktop systems require stable broadband connectivity because they are in a constant two-way communication. If you are planning on using a desktop system to connect to a meeting or class, it is best to perform a test to ensure your connectivity is stable enough to cover the duration of the event.

Now that you know the basics of each delivery method, let's look at parameters to help you decide for your specific event. Your first question should always be what is my distant audience? Many times overlooked, events can be presented locally at a site that is wonderful and thoroughly engaging that is an absolute disaster at a distant location. What your distant audience is and what you want those distant people to gain from the event can ultimately make the decision for you as to what technology to use. Sometimes the technologies can be mixed to leverage the asset of one system to augment another. If you are not looking for immediate feedback from your remote audience, or your event can be recorded and watched/listened to later, than Videostreaming or Podcasting could satisfy your needs. If the content or application is the most important aspect and interaction is secondary, than Webconferencing would be a great choice. In areas where interactivity and the people are most important, a Videoconference is the front-runner. Remember, for true success you have to apply specifics to these areas to see which system works best.

Because these technologies vary widely from brand to brand within the base category yet still manage to have many common overlapping features, a simple if-then decision matrix is hard to develop. It is best to apply specifics when deciding which system to use. For example, you're doing a presentation where the content, a video of rising smoke, is most important. Even though content is most important, and generally webconferencing handles content best, Webconferencing should not be the method of choice as the ability to show the content in smooth motion is not available. For this scenario any of the other three methods would suffice. In fact, videoconferencing combined with either Webstreaming or Podcasting would be an excellent combination offering interactivity with smooth motion during the live event and the ability to replay the sequence with the recorded Videostream or Podcast. If you're presenting a blueprint and asking participants to make design decisions then Webconferencing is a strong choice allowing for high quality graphics with the ability to interact. Videostreaming and Podcasting may prove ineffective as the graphics may not be of sufficient resolution to be legible. The situations and scenarios come in a multitude of variations. If looking to conduct an event or design a lecture, it never hurts to ask assistance.

Finally, let's look at clearing up some blurred areas to help you make a decision. Starting with the streaming technologies, Videostreaming or Podcasting with Chat is not a true live event. In the capture, conversion, and posting of the event there is a minimum inherent delay between the origination and the receiving site. Usually the minimum delay is less than 20 seconds but based on network activity can be a minute

or longer. This delay means anyone remotely sending in a question or comment via chat is referring to something that has already occurred in the origination room. It can be disruptive if the presenter has already moved forward a new concept and has to backtrack in order to address the remote location. Knowing this is a limitation and planning accordingly can help to minimize the distractions this can cause.

Webconference with video and a Videoconference are also not the same. As the Webconference is designed around the individual at a computer, the video signal is usually limited in size and resolution and not developed for viewing farther than a couple of feet from the screen. Often referred to as 'Postage Stamp' video, the video image generated in a Webconference is treated more as secondary and not designed for full screen viewing on a larger monitor. Also, even though it is the video source, it may not be smooth motion at a full 30 frames per second. This will probably change over the next few years as the ability to transmit and receive in smooth motion becomes more commonplace within the Webconference environment. Whether or not Webconferencing adopts full screen video is yet to be seen as the content is still seen as the primary function for Webconferencing systems.

Videoconferencing with content is not true collaboration as is available in many Webconferencing systems. Even though videoconferencing has a second channel designed to send graphics at higher resolution (nearing true computer image quality) it is still just an image being sent to the remote locations. I may be able to show you a PowerPoint slide but you cannot manipulate or interact with it in any way.

Within each technology there are additional features and limitations that are specific to the version. A feature you need in a Cisco version may not be available in the Adobe version. Likewise someone with only Windows Media Player could not watch a Flash stream. Identifying what you want to present and how you want it received is the first step. Then talk with the professionals that manage the systems to describe their specific features. Knowing the capabilities of the methods available to you combined with how you want it presented and received will ensure you chose the right technology with the best chance of providing a successful session.