



WHITE PAPER

Live and On-Demand

Streaming Video with LifeSize UVC Video Center

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Live and On-Demand

Streaming Video with LifeSize UVC Video Center

Overview

Organizations and institutions of all sizes use streaming video as part of their overall communications strategies. Numerous studies have shown that video is the most effective means of communicating for impact and retention. This has been proven in the real world by thousands of customers who are using video to enhance their enterprise communications.

Progressive organizations use video communications to inform their constituents, gain a competitive advantage and engage employees, customers and targeted audiences. Investments in video conferencing infrastructure can be leveraged to stream and record content from video conferencing systems located in classrooms, medical facilities, meeting rooms and offices. Video conference and streaming functionality also can be integrated into an organization's Unified Communications strategy, thus creating a truly integrated communications platform.

However, it is important to note that video is very different from other data types. There are many challenges to ensuring that video is always accessible

STREAMING VIDEO DEFINITION

Streaming video, also known as "streaming media" or "online video," is the process of delivering a video and audio clip over any Internet protocol (IP) network, including wireless. There are a variety of technical methods for doing so, but the key point is that the video stream originates from a central server, or multiple servers, and is delivered to multiple end users who view it on their computers, mobile devices or television.

Streamed Video Can be Viewed Live or On Demand
Live streaming video means that the event is being streamed and viewed as it happens. *On-demand video* means that an event, meeting or some other production has been recorded and uploaded to a server so that viewers can watch it at a time that suits them.

without disrupting the network and other mission critical applications.

This paper will discuss streaming video characteristics, applications and challenges, and how LifeSize can help any size organization implement an enterprise video streaming system that's easy to deploy, provision and use without putting strain on the network.

Unique Characteristics of Streaming Video

There are three key differences between video and other data types:

1. Bandwidth

- Video (especially live video) requires a consistent amount of bandwidth to deliver a positive user experience.
- Video consumes much more bandwidth than other data types. For example, a high definition video stream might require 768 Kbps or more.

2. Storage

- Video files are typically much larger than those of other data types.
- For example, a one-hour high definition video (encoded at 768 Kbps) would require almost 350 MB. Compare that to a typical email of 75 KB or a large Word doc or PDF of 1 MB.

3. Simultaneous Access

- The biggest difference is that multiple people can access the system at the same time, especially for live video.
- This can create bandwidth issues if the streaming system is not properly planned and deployed.

Major Trends in Enterprise Streaming Video

Any way you look at it, video usage is exploding. Video will account for more than 50% of total Internet traffic by 2012 and 90% by 2015.¹ Additionally, mobile video is expected to grow 100% per year until at least 2015.²

As is the case with many of today’s technologies, widespread consumer use has led to mainstream adoption by businesses, educational institutions, health-care organizations and nonprofits. As people view streaming video in their personal lives, they naturally understand the unique ways it can be used and incorporated in their professional lives. If the organization does not embrace video, then the employees will implement it on their own, which could lead to inconsistent, low-quality communications and the loss of confidential information.

This is why so many organizations are aggressively implementing enterprise video streaming solutions to complement their video conferencing infrastructure. The market is large and growing.

What has led to this growth in streaming video in the enterprise?

CHART 1 Streaming Video Examples

	Live Video Streaming	On Demand
Consumer	Sporting Events (Major League Baseball, Olympics, etc.) Concerts Presidential Addresses	YouTube™ News Clips Hulu™ Netflix™
Business/ Education	Executive Broadcasts Town Hall Meetings Training Events Distance Learning	Enterprise YouTube (Employees shoot and upload video) Video Datasheets Customer Testimonials Classroom Recordings Business Presentations

Frost & Sullivan indicates that the enterprise webcasting market (a slice of the overall enterprise video streaming market) is just entering its growth phase, as it is expected to grow nearly 25% per year through 2017.³

1. Improved User Experience

Gone are the days of looking at grainy, postage-stamp sized streaming video. Organizations today are delivering high definition video to PCs, Macs, mobile devices and even televisions. The quality improvement is the result of better compression and delivery technologies. Simultaneously, the capabilities to publish and consume video have improved tremendously, including social networking capabilities. Users are able to publish, share, comment, rank and take action on videos that they have viewed. This helps to increase its value and let the good content “rise to the top.”

2. Mobile Device Explosion

The explosion of mobile devices and tablets has led to both the increased consumption and the increased creation of video. Tablets and smartphones can now participate in video conferences just as well as traditional room systems. These same devices can be used to easily capture and publish video for later viewing by these same mobile devices.

3. Immediacy

Creating video is no longer only the domain of executives and a team of video production staff with weeks of preparation. Video can be created by anyone, anytime, with innovative new products such as the LifeSize UVC Video Center, which allows for one-button recording and streaming and live chat interactive communications.

Gartner estimates that hours of video streamed per month will increase 50% from 2010 to 2012.⁴

Key Requirements for an Enterprise Streaming System

It is important to stress some key requirements for video streaming systems so that organizations are able to gain the full benefits of such an implementation. There are six key requirements that must be addressed with any system:

1. Ease of Use

Video is a new paradigm for many users and can be intimidating to some at first. If the new functionality requires excessive training and time commitment, users simply will not use it.

Creating content needs to be as easy as pressing a button. Content must be easily searched. Accessing video needs to be as simple as watching a video on YouTube. Users need to be able to simply click on a link and watch the video play.

Streaming Video Applications

The technology for streaming video is available and mature, and customers are using streaming video to support a variety of applications. In many cases, these applications supplement or replace traditional forms of communications—email blasts, phone calls, conference calls and even printed materials. And customers are finding unique ways to deploy streaming video every day.

There are a variety of applications for streaming video (*Chart 2*). This paper covers the first six, facilitated through UVC Video Center.

CHART 2 Streaming Video Applications

Application	Description
Executive Broadcasts/Town Hall Meetings	Company executives address all employees in the company with a live video stream. The event is recorded so that those who could not attend are able to view it later. Refer to <i>Case Study A</i> .
Video Sharing to Disseminate Knowledge	Organizations allow their employees to create, publish and share videos with the rest of the organization. For example, a customer service department can create videos to demonstrate how to troubleshoot an issue. Or a branch manager can show how a new store layout improved traffic flow. The possibilities are endless. Refer to <i>Case Studies A and B</i> .
Training	Training sessions can now be streamed live and recorded for later, on-demand viewing, decreasing cost and increasing accessibility.
Recording Meetings	Many organizations record meetings so that those who could not attend can view them at a later time, often for compliance purposes. Existing video conference equipment and products such as LifeSize UVC Video Center make recording extremely easy. Refer to <i>Case Study B</i> .
Classroom Streaming and Recording	One of the most popular applications in higher education, streaming and recording of classroom sessions is now straightforward. This helps facilitate distance learning for students who cannot be physically on campus and also allows for an improved learning experience by allowing students to review previous classroom sessions. Refer to <i>Case Study C</i> .
Marketing	Sales and channel training, product launches, customer testimonials and “video datasheets” are all ways that marketing departments are using streaming video to tell their stories.
Digital Signage	Digital signage, enhanced with video, allows organizations to reduce printing costs, enable rapid changes and grab constituents’ attention, ultimately improving communications.
Television Distribution	Television distribution in the enterprise entails receiving a television feed (via cable or satellite or over the air) and converting it into a streaming video that can be viewed on the IP network.
Surveillance and Monitoring	The same system that is used to distribute video to end users can be used to capture surveillance video or monitor high-value equipment such as factory lines or offshore oil rigs.

2. Integration with Video Conferencing and Unified Communications

As organizations move toward a UC environment, it is critical that their video conferencing technology seamlessly integrate with the UC environment. Similarly, from a streaming video perspective, users need to be able to publish, view and collaborate on video without having to leave the UC client tools. Ultimately, the video conferencing, video streaming and UC tools all need to work in tandem as an end-to-end solution.

3. Mobile Device Support

Today, organizations must deliver video to more than just PCs or Macs. Today's users have multiple devices (laptops, smartphones, tablets), and they wish to use them all to access video. The solution must be able to seamlessly deliver video to a variety of mobile platforms without requiring new workflows or manual configurations.

4. Scalable Distribution

Due to bandwidth requirements, distributing video across multiple geographic sites to hundreds or thousands of viewers can be a real network challenge. It's important that a streaming solution includes a federation or reflection capability to distribute video across an organization's network with minimal load on the wide area network where bandwidth is constrained.

Wainhouse Research estimates that the total market for enterprise streaming solutions was almost \$500 million in 2010 and forecasts it to grow to nearly \$1.5 billion by 2015.⁵

5. Social Media

The streaming video system needs to be able to provide an easy way for users to publish, view and collaborate on video. With easy online access and features such as Comments and Chat, streaming and recorded videos can be more "social" and allow multiple parties to add value to the video content.

6. Security

Video-based communications are impactful and often have confidential information that needs to be protected. The streaming system needs to ensure that users have access only to video that is appropriate for them. Additionally, different levels of system access should be provided based on the users' roles in the organization.

The ability to integrate with current enterprise security and user databases such as Active Directory and LDAP is paramount.



LifeSize UVC Video Center

LifeSize, a division of Logitech, has built a reputation as a relentless innovator of video systems and infrastructure. The company disrupted the industry in 2005 by delivering the world's first business-class high definition video conferencing system. In 2009, LifeSize introduced the first 1080p system under US\$7,000 with an embedded multipoint MCU, followed by a host of other innovations—multiparty bridging with the lowest cost per port in the industry, robust support for mobile and desktop video collaboration, cloud-based solutions and more.

LifeSize debuted LifeSize Video Center in 2010 to an audience eager to do more with their video resources. LifeSize was the first to offer a one-button streaming, recording and auto-publishing video solution. In January of 2012, the company unveiled the LifeSize UVC Video Center, which is part of the LifeSize UVC Platform and works seamlessly with LifeSize 220™ systems to stream and record video content anywhere in the world and to audiences of any size.

With UVC Video Center, any company can create content and stream it live or on demand. LifeSize UVC Video Center supports an unrivaled number of concurrent recordings, on-demand streams and simultaneous live streams, all in crisp 720p30 HD

video. With the simple push of a button, you can record and broadcast executive updates, business presentations, sales meetings and training sessions as well as share data, charts and images.

What Makes LifeSize UVC Video Center Unique?

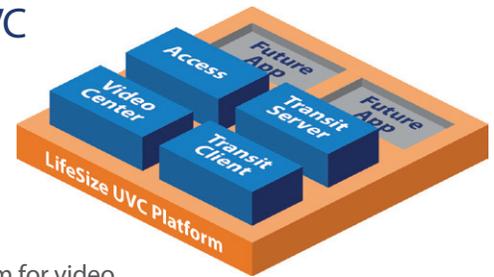
- **Easy to Use** – One-button recording requires no training and is a simple way to extend video conferencing to more people, across the street or across the globe.
- **Ubiquitous** – You need only one LifeSize 220 endpoint to distribute the stream to the LifeSize UVC Video Center, allowing content to be created even when in conferences with non-LifeSize systems or, for example, with users participating via Microsoft Lync or on non-LifeSize video endpoints.
- **Mobile** – LifeSize UVC Video Center offers native support for Apple iPad/iPhone/iPod. Automated adaptive streaming creates mobile profiles. Flash-based streaming requires no player download for PCs, Macs or iOS devices.
- **High Performance** – Encoding is done on LifeSize 220 video systems, which eliminates the need to transcode on the LifeSize UVC Video Center. This provides unrivaled performance and immediate auto-publishing—no more long transcoding delays.

- **Federation** – Enables bandwidth-optimized multisite streaming. With federation, multiple LifeSize UVC Video Centers are linked together across geographic locations, sending only a single video stream on the WAN to each UVC Video Center, conserving bandwidth and enabling live streaming events that a network would otherwise be unable to support.
- **Multicasting** – Sessions can be streamed live while keeping bandwidth utilization low, providing a cost-effective way to support streaming to hundreds or thousands of viewers for live streams.
- **Text Chat** – Thousands of viewers of live streams can interact via text chat with the speakers and participate in the streaming session.
- **Network Attached Storage** – LifeSize UVC Video Center stores the videos recorded to it on local hard drives. You can configure the server to use Network Attached Storage (NAS) to allow for nearly limitless video storage and added security.
- **Easy to Deploy** – Deploy via virtual machine software or the UVC hardware option.

LifeSize UVC Platform

LifeSize UVC Platform is a fully integrated and virtualized

software platform for video conferencing infrastructure. It is the only video conferencing infrastructure that consolidates multiple products and makes them instantly available from one common interface. Designed to give IT leaders and staff more flexibility and control of their network environment, the UVC Platform is fundamentally changing how video conferencing infrastructure is deployed and managed—faster, easier and more affordably.



LifeSize UVC Video Center, along with other UVC video infrastructure applications, is embedded within the LifeSize UVC Platform, which can be deployed as hardware or as virtual machine software. From the LifeSize UVC Platform, you can instantly activate LifeSize UVC Video Center or any UVC application.

Flexible Licensing

Because UVC Video Center is part of the UVC Platform, it overcomes the challenge of a one-size-fits-all approach to streaming and recording, which many times forces customers to buy more features and capacity than they need. Lower capacity and pricing options make streaming and recording more accessible in more locations and by more companies. Customers can choose the feature set and capacity needed for the short term and then buy more as their needs grow. With two feature tiers—Standard Edition and feature-rich Enterprise Edition—LifeSize simplifies licensing complexity, making purchasing and deployment easier, faster and more targeted to exact needs.

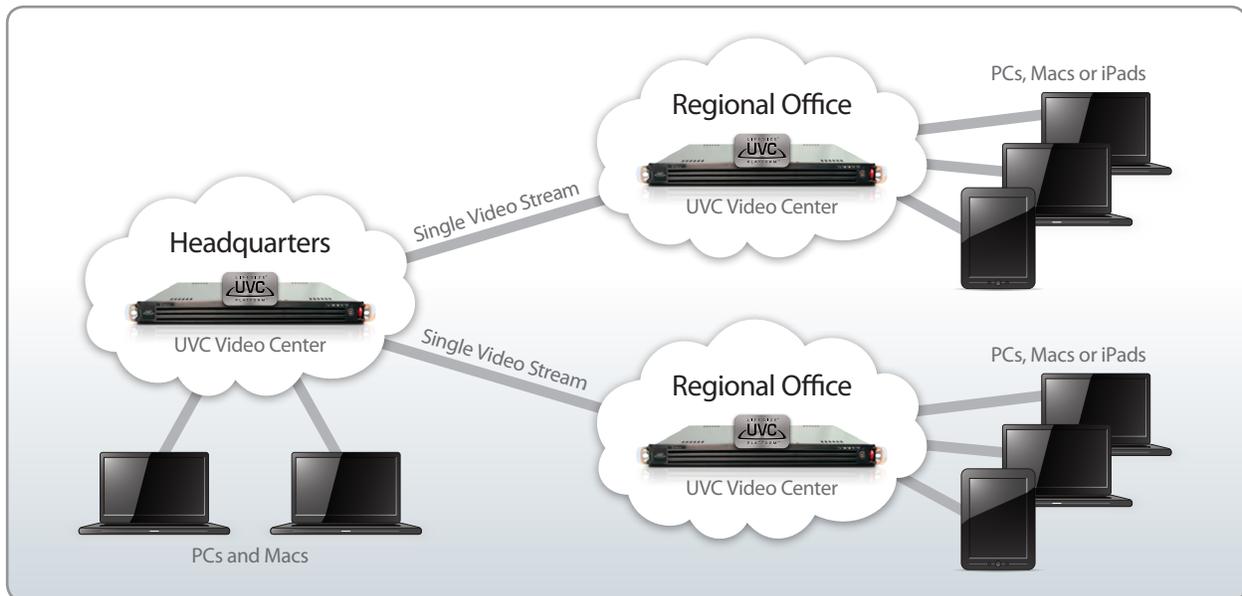


FIGURE 1 Federation

Expanded Scale and Capabilities

LifeSize UVC Video Center offers three very important new features that expand streaming capabilities: federation, multicasting and text chat. Let’s take a closer look at each.

Federation

This enables bandwidth to be optimized for multisite streaming. Multiple LifeSize UVC Video Centers spread across geographic sites can be linked together, or federated, to help reduce WAN bandwidth utilization. So instead of having to send a separate stream to every user watching a video stream at every global site, only a single stream is sent from the UVC Video Center where the recording is being created to each of the different global sites around the world. Viewers are then delivered streams from their local UVC Video Centers or UVC Video Center reflector that is on the same LAN. This conserves bandwidth across the WAN and allows an organization to quickly and simply deploy an internal content delivery network.

For federation of multiple UVC Video Centers, each needs to be Enterprise Edition. One simple way to set up federation is to have a primary publisher, a UVC

Video Center Enterprise Edition with recording and streaming capabilities, federated with multiple UVC Video Center reflectors set up in remote branch offices. Reflectors are UVC Video Center Enterprise Edition applications with just streaming licenses and no HD recording capability. Thus, they are full-fledged UVC Video Center applications running on the LifeSize UVC Platform but with only the ability to stream videos. At any point in time, additional streaming or recording seats can be added to these remote branch offices so they can scale with growing needs.

Multicasting

With unicast streaming, each viewer is delivered a dedicated stream from the server, and the bandwidth required is directly proportional to the number of viewers watching the stream. Likewise, the server load increases based on the number of viewers who connect to it. For live streaming, this becomes a limitation since bandwidth requirements for large audiences are high and so is the cost. Servers will not scale since every connection from the viewers will drain some amount of server resources, which are limited. With multicasting, sessions can be streamed, keeping bandwidth utilization low. Multicasting is best suited for

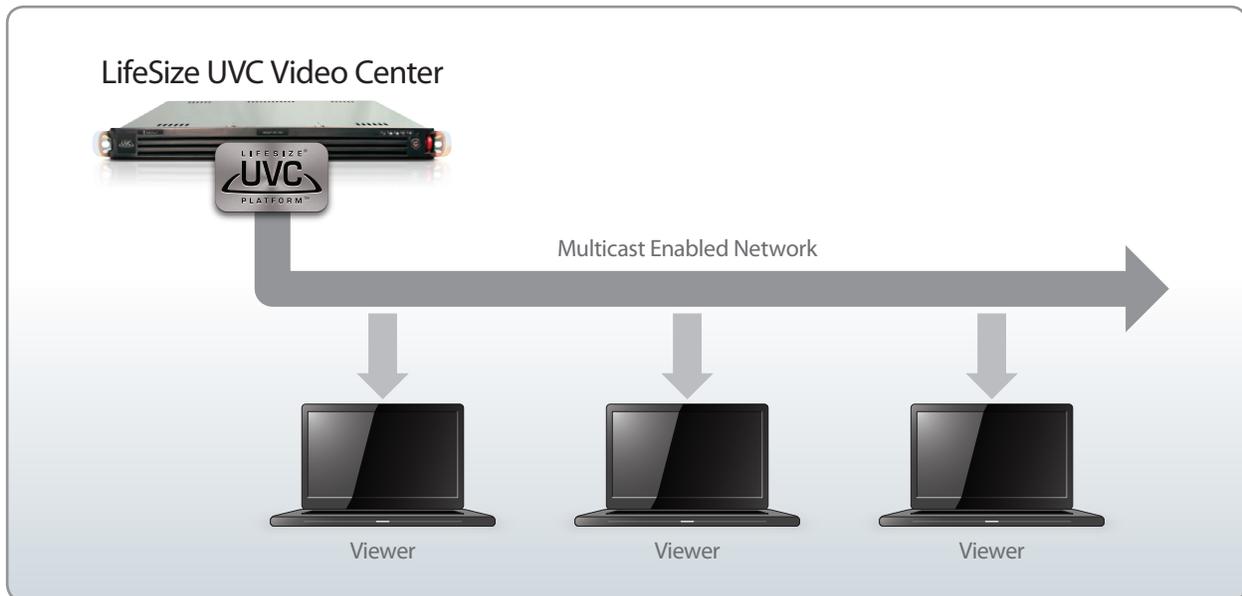


FIGURE 2 Multicasting

addressing large audiences (hundreds and thousands of viewers) that require live streaming and for cases when the required capacity cannot be planned ahead of time. It also needs the enterprise network to be multicast ready so that it can handle the streams coming from UVC Video Center.

Text Chat

Being able to post questions to the speakers in real time during a live-streaming session is essential for enhanced collaboration. Now thousands of viewers of live streams can interact directly with the speakers and participate in the streaming session, a perfect solution for large-scale live events such as public webinars and company all-hands meetings.

Six Key Aspects of LifeSize UVC Video Center

LifeSize UVC Video Center exceeds all of the requirements for enterprise video delivery. Let’s review the six key requirements and understand how LifeSize exceeds them.

1. Ease of Use

The LifeSize® 220™ Series systems have been

optimized to work with UVC Video Center to stream and record video and data inside and outside a call. Most endpoints, LifeSize or third-party, can call into the 220 system to participate in a streaming or recorded video call. (See LifeSize datasheets on the LifeSize website for details.) Initiating a streaming and recording session could not be easier. Using the intuitive LifeSize remote control or LifeSize Phone with a LifeSize 220 Series video system, users simply press the record button and the session is recorded and optionally streamed live. The video will automatically show up as a live stream in the LifeSize UVC Video Center interface for those who have permission to view it. Once the recording is complete, it automatically displays in the LifeSize UVC Video Center web-based portal. Searchable metadata is included with the video so that relevant content is easy to find. Viewing is as easy as pressing the play button.

2. Integration with Video Conferencing and Unified Communications

Many organizations are rolling out Unified Communications (UC) initiatives to consolidate their video, voice and messaging systems. LifeSize strategically partners with technology providers to

ensure that customers get the most complete products and solutions they need for effectively conducting day-to-day video communications. In 2010, LifeSize partnered with Microsoft to interoperate with Microsoft Lync, a leading UC solution. The LifeSize 220™ series endpoints and LifeSize Passport™ have been tested and qualified by Microsoft to provide a high quality user experience, with “just works” installation.

LifeSize provides an end-to-end integration with the Lync system. Here is how it works:

- LifeSize video conferencing systems can participate in video conferences with Microsoft Lync clients.
- To stream and record one of these sessions using LifeSize UVC Video Center, the user simply presses the record button on the LifeSize remote control or LifeSize Phone.

3. Mobile Device Support

LifeSize UVC Video Center can deliver video to the most popular mobile devices, including laptops, smartphones and tablets.

LifeSize UVC Video Center can automatically transform the video stream into a format appropriate for the iPad/iPhone/iPod. Users who access the video from those platforms will receive a video stream optimized for their devices.

4. Scalable Distribution

Most solutions on the market focus on delivering video either on enterprise networks or on the public Internet but not both. LifeSize UVC Video Center provides the ability for customers to stream both on the private corporate network as well as on the public Internet in a seamless workflow.

Why is this important, and what are the differences between private network and public Internet delivery? The best way to answer this is through an example.

Let’s say an organization wants to conduct an executive town hall meeting with 10,000 employees. The company loves the high definition video quality it gets from its LifeSize video conferencing units, so it wants to stream the video in high definition also. The following describes the setup:

- 5,000 viewers are located at the company headquarters.
- 1,000 are at each of four regional offices connected to the main office by T1 lines.
- The remainder can access the video only over the public Internet due to travel.

First, let’s consider the delivery to the employees who are located at the different company sites. The headquarters location has a high bandwidth backbone, but since the event is streaming in high

CASE STUDY A

Large Enterprise Business Events and Townhall Meetings

Broadcast events and multiple presenters to large-scale audiences

A large company has purchased LifeSize UVC Video Center in order to stream and record events. The company has primarily been using LifeSize UVC Video Center to record meetings and also has done several events that had approximately 750 viewers each.

The CEO was so impressed with the new capabilities that she decided to use LifeSize UVC Video Center to deliver a company-wide town hall meeting to the entire staff of 50,000 to announce

a major new company direction. She wanted executives in other locations (for example, Europe and Asia) to be able to participate in the live meeting and provide their perspectives.

LifeSize easily met the need for multiple presenters in multiple physical locations. The company utilized its LifeSize systems in each location and switched between locations according to who was speaking at the time. One stream was sent to LifeSize UVC Video Center for distribution.

LifeSize UVC Video Center provides added capabilities for large-scale and multisite distribution. Additionally, it allows the customer to easily distribute the on-demand video playback on the Internet to individuals who are traveling and couldn’t attend the live session.

CASE STUDY B

Midsized-Large Company Deploying Microsoft Lync

Live streaming and recording of meetings

A major high-tech firm rolled out a new deployment of Lync to give all of its employees access to IM (chat), presence, voice and video calling from their laptops. The company has office locations around the world. Employees often work remotely from home and travel for business. The remote employees use Lync video conferencing to provide frequent and important updates about their meetings with customers.

The company needs a Lync solution for its meeting rooms, where employees inside the offices come together for video calls with people in other locations. These update meetings are usually fast paced, so the company needs LifeSize UVC Video Center to record the meetings for easy review later and to make sure important details are not missed. This also allows people who are

definition, 768 Kbps will be needed for each user if the streams are delivered via unicast. That adds up to a lot of bandwidth from the server (almost 4 GB/sec) and is not a scalable method of delivery.

LifeSize UVC Video Center can help solve this problem by using two different bandwidth-saving features—multicast streaming and federation. Let's first look at how we can use multicast streaming to conserve LAN bandwidth at the headquarters site. LifeSize UVC Video Center can send a multicast stream on the local area network (LAN), which means only one video stream goes onto the network and anyone can "tune in" to the stream. This reduces the load on both the server and the network, and all 5,000 users can watch the live video stream.

The next challenge is reaching the users in the regional offices. Typically, the wide area network (WAN) connections are not multicast enabled, so the users will need to access the video as a unicast stream. But again, bandwidth becomes an issue. Since the stream is 768 Kbps and the connections are T1 (1.5 Mbps), all available bandwidth is used up after only two users.

in other time zones and may have missed any meetings to review the meeting discussions, which are documented and archived for easy access. Users can even invite others to view the same live stream and chat about it in real time using the Lync chat functionality.

LifeSize 220s Series and LifeSize Passport along with UVC Video Center support Lync use as follows:

- The LifeSize 220 Series endpoints and LifeSize Passport register directly to Lync, supporting Lync calls between these conference rooms and the Lync client on laptops.
- The integrated MCU in the LifeSize Room 220 and LifeSize Team 220s bridge together four-way and six-way video calls and provide continuous presence video so that people can see everyone's reaction to the discussion vs. Lync itself, which shows only the video of the active talker.
- LifeSize 220s and LifeSize Passport have one-touch recording to the UVC Video Center.

Fortunately, LifeSize UVC Video Center can solve this problem by federating multiple UVC Video Centers. It can receive a single unicast stream and then redistribute it to users at the regional office (either multicast or unicast). In this case, only one stream needs to traverse the WAN, but all of the users at the regional office can still receive a high definition video stream. At the end of the live stream, videos are copied over to the federated UVC Video Centers for on-demand viewing so that local viewers can watch the videos on their local UVC Video Centers.

What does a possible deployment look like?

Possible Deployment:

Three sites with streaming capacity

Site A: 1 UVC Video Center Enterprise Edition

Site B: 1 UVC Video Center reflector pack

Site C: 1 UVC Video Center reflector pack

LifeSize UVC Video Center can also transform the video from one format to another. For example, assume some users at the regional office are accessing the video from their iPads. The iPad cannot

receive Flash video, so the video needs to be converted into the Apple HLS format. LifeSize UVC Video Center takes care of this. The single Flash stream can be delivered to PC and Mac users with a Flash player. That same stream can also be transformed into an HLS stream and delivered to iPad users.

While the above example focused on live video delivery, the same challenges hold for recorded video on demand. (The only difference, in many cases, is the number of simultaneous viewers.) LifeSize UVC Video Center works with on-demand files in the same manner, so the same bandwidth efficiencies can be obtained with on-demand videos as well.

Only LifeSize UVC Video Center is able to distribute the video to all types of network locations—private network and public Internet—and to a variety of devices. This capability can make the difference between a successful deployment and one that falls short of expectations.

5. Social Media

Video is no longer a passive viewing experience. Users want to be able to collaborate with other users. This increases the value of video, makes the video system more useful and increases the return on investment realized by the organization.

LifeSize Video Center offers built-in chat and comment support functionality. Participants can interact with the speaker during live sessions, enhancing the collaboration experience. Text chat extends communications to more people during live streaming video sessions, engaging viewers and allowing them to comment, ask questions and provide feedback. It is especially useful when streaming to large groups, such as in training sessions, town hall meetings and video classrooms. On-demand videos, previously recorded and archived, offer a comment area where viewers can provide feedback, ask questions or relay messages to the content creator and viewers.

Other popular features that enhance the reach and scope of video streaming and recording include:

- **Create a Channel** – Group together related videos and add permissions to access and view.
- **Feature a Video** – Administrators can feature selected videos, usually important videos that users are encouraged to watch, such as executive town hall meetings.
- **Embed a Video** – Content owners can copy the code for embedding publicly accessible videos into a website or social media site.
- **Customizable Interface** – Organizations can customize their UVC Video Centers UI with

CASE STUDY C

University Setting for Distance Learning

Classroom streaming and recording

A large university has deployed LifeSize video conferencing solutions to enable its distance learning initiatives and to connect with other universities and corporate partners worldwide.

The university decided to implement a streaming and recording solution so that all of its classrooms could be streamed live and recorded for on-demand access. Since it had already made the investment to place LifeSize video systems in the classrooms, it was able to implement the program in a very cost-effective manner by simply deploying a single LifeSize UVC Video Center

appliance. Each of the LifeSize video systems can stream live to the UVC Video Center, which can redistribute the content to multiple end users and also record the content—both the video of the lecturer as well as the presentation graphics.

Because most of the end users will access the content via the Internet, LifeSize UVC Video Center can send one stream, which can then distribute the content to an unlimited number of users on the Internet. The university wants to allow users to embed the video files into the professor's Blackboard pages, which can easily be done by linking to the video URL in Blackboard or pasting the embed code into the Blackboard page. For more advanced integration, the Blackboard system can leverage the LifeSize API to automatically list videos from LifeSize UVC Video Center in the Blackboard system.

their logos and text to reinforce corporate branding and messaging.

- **API Support** – UVC Video Center supports integration with third-party applications, including Learning Management Systems.

Again, video is no longer just about viewing. It is about creating content that is useful to a select audience—customers, suppliers, employees or students—to help them be more productive and better informed.

6. Security

LifeSize makes every effort to protect sensitive information. LifeSize UVC Video Center has the capability to create recording keys, which prevent unauthorized use of the system and enable auto publishing. Multiple recording keys can be created, and these can auto-create metadata that is associated with the video (title, description, channel, author, tags, access permissions, video quality and bitrate).

Once users and groups are added to the system, organizations can manage access to content through categories. So any given group—for example, Marketing—can have access to any given category, such as Product Launches. Any new content that is published into the category will automatically be made available to those who can access that category. This makes the system extremely easy to manage and protects unauthorized access.

For authentication and access control, UVC Video Center employs roles. Roles allow users to have certain capabilities inherent in the system. For example, system administrators control the networking capabilities of the system and content administrators can manage content.

Conclusion

The use of video as a communications tool within organizations is exploding. Forward-thinking organizations are aggressively implementing video streaming solutions to complement their video conferencing infrastructure. To be effective and broadly adopted throughout the organization, solutions need to integrate tightly and be easy to use, deploy and manage.

LifeSize delivers:

- The industry's most powerful video conferencing and video streaming solution
- Best-of-breed capability that is unprecedented in the market
- Solutions that integrate seamlessly with the UC environment and existing video systems
- Flexibility to meet needs of SMBs to large, global operations
- Ability to create, manage and control video content

To learn more, visit the LifeSize website at www.lifesize.com.

1 <http://www.tvtechnology.com/article/121344>

2 <http://www.slideshare.net/kleinerperkins/kpcb-top-10-mobile-trends-feb-2011>

3 Frost & Sullivan, *World Enterprise Video Webcasting Solutions*, 2011.

4 Gartner, *MarketScope for Video Content Management and Delivery*, February 4, 2011.

5 Wainhouse Research, *Enterprise Streaming Solutions Market Size and Forecast*, June 30, 2011.



Universal Video Collaboration

About LifeSize, a division of Logitech

LifeSize is a pioneer and world leader in high-definition video collaboration. Designed to make video conferencing truly universal, LifeSize solutions are simple to buy, adopt, support and use. Offering video conferencing systems and software applications as well as a full line of video infrastructure, available on premise or in the cloud, LifeSize is committed to universal video collaboration. With LifeSize, customers can participate in large multi-party HD calls, live streaming and recording, collaboration on any mobile device, on any network, all at the highest level of quality. LifeSize was founded in 2003 and acquired by Logitech in 2009.

For more information, visit www.lifesize.com.



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