Unified Communications-as-a-Service (UCaaS) for Video Conferencing

The proliferation of technology at a consumer level has been empowering. Laptops, tablets and smart phones now come equipped with extensive communications options, including microphones, multiple cameras and mobile access to high speed data networks. However, the advertised promise of "anytime, anywhere" communications using the power and flexibility of devices enabling real time face to face communications, often hits the reality barrier when it comes to the enterprise where video conferencing still falls prey to location tyranny, i.e. the need for participants to huddle in carefully maintained video environments.

By now, we would have expected video to revolutionize **s**tandard business communication; the barriers of communication should be falling. So why is video reality falling short of the promise?

The short answer is 'integration', a simple catch all for a bevy of challenges when it comes to keeping the enterprise architecture, and applications lifecycle, in synch with the rapid proliferation of end user technologies and expectations.   All video and audio technologies use different standards. The devices don't all talk to each other, and when they do they are using old standards that can't get through firewalls. Dedicated conference room infrastructure products such as Multipoint Control Units (MCUs) and gateways purchased in the past won't handle connecting them all. In some cases, millions of dollars already spent three years ago cannot handle the sheer volume of desktop and mobile connections or the integration of newer technology. Also unfortunate is that expensive annual maintenance does not get the buyer more resource ports, only software patches on what may be an outdated platform. In most cases, a completely new investment in hardware and infrastructure is required. The huge capital investment has to be revisited. Often it is reviewed before the previous investment has even been fully depreciated. The cycle then repeats itself. What happens when the next technology is introduced? Is a wholesale architecture overhaul required again? Does this mean another new major capital endeavor has to be undertaken?

The good news is that the lifecycle of legacy deployments can be cost effectively extended with video conferencing as a service. The market for enterprise applications is changing dramatically as more technology buyers opt for the simplicity and scalability of Software as a Service (SaaS) type models, which delivers advancements in technology, and functional capacity, at a reduced cost. Similarly, video conferencing as part of an overall Unified Communications deployment could greatly benefit a "services" based approach. It would be helpful to have definitional clarity to determine if a Unified Communications as a Service (UCaaS) solution is right for extending video communications.

Understanding Unified Communications as a Service (UCaaS) solutions

UCaaS an acronym for "Unified Communications as a Service" is an in vogue term. Why is this? Think of UCaaS as a "Software as a Service" (SaaS) type offering in the Unified Communications world. Video

implemented in the right environment means future technology growth at a reduced cost. Our experience tells us that Unified Communications, in particular video and audio, deployments are the "right environment" for a service solution.

In trying to discover if a UCaaS solution is right for video conferencing, it is important to have an understanding and definitions of the "Anything as a Service" (XaaS) model and Unified Communications.

What is the "Anything as a Service" (XaaS) Model? In this model there are a lot of terms, such as; "Software as a Service" (SaaS), "Platform as a Service" (PaaS)", "Infrastructure as a Service" (IaaS), and "Unified Communications as a Service " (UCaaS). For the purpose of this definition we'll refer to this model as XaaS. In a XaaS environment, the vendor provides and manages the technology for the customer without a fixed capital investment. Instead, the customer is charged on a monthly recurring basis and the vendor, besides managing and supporting the environment, also provides continual updates and technology refreshes. Thus, the customer does not have to buy new technology with each industry enhancement. This is especially important in technologies that rapidly advance, or where demand for resources scales higher over time. The infrastructure provided under a XaaS model may be located at either the customer's data center or hosted by the service provider.

What is Unified Communications? Unified Communications integrates various disparate enterprise communications and messaging technologies allowing intercommunication and collaboration among users. Delivering integrated conferencing in the UC environment is challenging. Different types of conferencing technologies use very different standards and on their own do not allow for interoperability. As the number of devices that support audio and video conferencing increases, so does the requirement to have a scalable service to provide interoperability. An architecture that supports turnkey video interoperability has to be deployed to connect PCs, room based systems and mobile devices for all internal and external users.
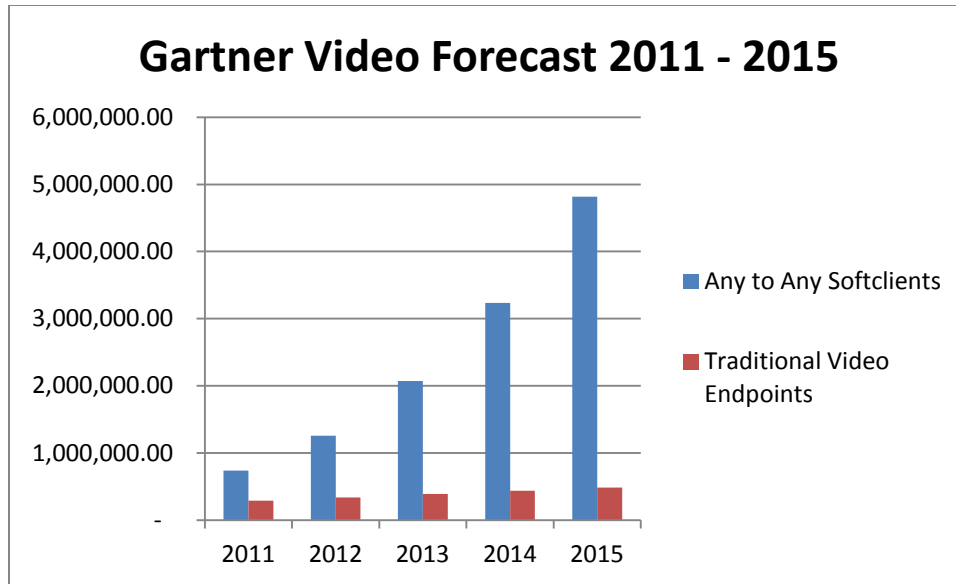
What is "Unified Communications as a Service" (UCaaS)? This is the provision of a XaaS model with a focus on the Unified Communications deployments. This can be typically as mix of SaaS, PaaS and in cases (mostly Cloud type offerings) IaaS.

Why does a service offering make good sense for Unified Communications?
A Gartner report ("Market trends: Videoconferencing Worldwide, 2011") indicates the following:

 "Organizations expect to grow their video-enabled UC deployments by on average 340% between 2010 and 2012". Additionally Gartner estimates the number of Video Soft client users to jump from 9.3 million in 2010 to 132.3 million in 2015.

This means companies will not only have the challenge of addressing new technology but additionally a large increase in video usage. Past video infrastructure port capacity decisions were based on expected conference room growth, which was typically below 20% per year. Video-enabled desktop, tablets, and smart phone growth will accelerate infrastructure port demand, rendering the MCU purchase idea obsolete.

Gartner Video Forecast 2011 - 2015

Year	Any to Any Softclients	Traditional Video Endpoints
2011	~750,000	~300,000
2012	~1,250,000	~350,000
2013	~2,100,000	~400,000
2014	~3,250,000	~450,000
2015	~4,800,000	~500,000

To effectively scale, Gartner states *"For the proliferation of personal video to actually take us from hundreds of thousands to hundreds of millions of endpoints, orders of magnitude cost reductions are needed in the infrastructure which links endpoints. Infrastructure will be needed to power n-way conference calls involving potentially many more endpoints than in the past, considerably more ad hoc interactions, and significantly more communications external to the company. Given the cost of existing MCU and bridging architectures (several thousand dollars per HD port), the existing port-based infrastructure model is unsustainable as a mechanism for supporting a large base of softclients."*

Key points:

- **Return on Investment**
  A good way to evaluate UCaaS solutions is to look at total cost of ownership. If a technology has a rapid refresh rate then it is very likely the cost of hardware, labor, support and maintenance ends up being more than the UCaaS solution over the same period. Risks of not owning the solution are mitigated when technology growth appears in the same time period an infrastructure overhaul is required to stay on top of technology.

- **Accessibility to Technology Experts**
  UCaaS vendors employ technology experts readily accessible and escalation to a valuable knowledge base of certified engineers in the Unified Communications field. This is important when a communications issue requires a rapid response to address the problem, as is often required in a multiparty event. A company and organization does not have the luxury of wading through several support levels to get something solved. A UCaaS vendor will know the customer's environment, the technology, and have the ability to rapidly reach back to experts for support.

- **Scalable Technology**

  With a UCaaS solution, emerging technology will be implemented into a company's environment at a quicker rate. The UCaaS vendor will provide upgrades, thus eliminating, a company's wait on budgeting funds for an overhaul, an extended purchase cycle, install and training. As technology changes or new devices are introduced into the UC ecosystem, the UCaaS provider will be able to deploy faster and expand easier.

What should you look for in a UCaaS provider? The services offered by many current providers appear to be similar, but in fact have distinct differences. It is important to ask the right questions when looking for the right SaaS solution.   If you pick the right one, they will act as your technology partner. When choosing a provider, best results can be achieved by following these action steps:

- **Confirm their history**

  The UCaaS provider's history is very important. Understand the story behind the evolution of their UCaaS model. Does the provider have a real story behind it? Has the company evolved and matured, or did the provider just recently decide it was going to be UCaaS provider? Companies that have evolved and matured as UCaaS providers have learned lessons and improved their model over time which makes them as a technology partner a real asset.

- **Verify they have the skills and certifications needed to support you**

  Determine the UCaaS provider's skill base. Are their engineers certified? How knowledgeable is their helpdesk? In Unified Communications when there is an issue it is something that needs to be addressed "now" because "after the event" is too late. Ask to speak with their help desk and review their ticket logs and uptime statistics

- **Inquire about the provider's vision and ability to scale**

  Find out about the company's technology vision, including looking at the past. Explore how their past demonstrates a technology vision that has gotten them to the present. Ask about their capital investments and internal R&D. This builds confidence in the stated vision for the future. Do they have a strong capital structure to expand and keep pace with customer growth?

- **Go "Behind the Scenes"**

  Does the "back office" keep up with their marketing promises? Visit the facility where their support team and engineers reside and get a tour. By being able to see and talk to the rest of the team you can get a comfort feeling that you'll get the level of support you need when you need it. Test drive the service – ask for access to any cloud services they provide, and use the service for your next meeting.

It is about the technology solution. When talking to a UCaaS solution provider, make sure you understand how their solution's architecture supports their customers now and in the future. Below are

some important considerations to look at when exploring the technology solution:

- **Find a provider that supports installed legacy technology as well as new**
  Many environments have already invested in older systems that should not have to be replaced or be a lost investment in order to bring in new technology. Replacement cycles vary and depending on budget, sites are upgraded over time. Find a vendor that is able to integrate older systems with newer technology.

- **Ensure the provider has a solution for disparate communication technologies**
  Unfortunately, as it comes to video and audio conferencing, technology is implemented by various manufacturers using different technology: proprietary technologies; different standards based technologies like SIP and H.323; or special variations of technology like Microsoft Lync implementation of SIP. These communications protocols do not always provide for interoperability. As new technologies evolve, standards and ways to implement them will as well.

- **Is the provider's architecture designed for adding new technologies in the future?**
  Make sure the provider can demonstrate how a new technology can be implemented into their SaaS architecture without requiring a complete overhaul. More important than the raw number of different endpoints is the range of quality and user experience, so look for a SaaS solution that spans high-definition to handheld mobile devices. It is important to know that they are equipped for future growth.

- **Find a solution that is accessible to the end user**.
  Does IT have to continually support users so it runs on their systems, or is the experience seamless? When looking at a solution, seek one that allows users to actually access the technology where needed; inside the company, on the road, at home and when visiting other companies, and not just in a mandated conference room setting. Anytime, anywhere access is key. Have the provider explain the process and also show it to you. For example, if you want the ability to bring outside users into your environment you should be able to connect to a system outside your network without prior setup. Have them demo their service while inside your corporate environment. Can they do this without getting your IT involved? Can they do this without installing something on your site?

UCaaS has changed the delivery options for enterprise applications and holds the same promise for bringing flexible, ubiquitous video conferencing to enterprise UC. Bringing together investment in existing environments and extensions to new devices and mobile access via a UCaaS extension not only makes good business sense in terms of collaboration and productivity gains, but also makes for a good business case. Finding a solid technology partner is a key consideration in making this combination successful. Careful vendor review is a must. Review the recommended actions and questions in exploring whether a UCaaS solution and a particular vendor is a fit for your company.