

Moving toward unified communications

Pave the way for the future with Adobe® Acrobat® Connect™ Pro 7.5

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The communications technology industry has been working toward a vision of unified communications (UC) in which voice, video, and data services truly converge on a single, shared IP-based infrastructure. The ability to receive all types of communication, independent of the means used to send or access it, will open up a new world of productivity and real-time collaboration in the office and beyond. In the world of web conferencing, UC will make it possible to integrate high-quality audio, video, and data interactivity, live or recorded, to a large group without latency.

Today, UC as a single, packaged application remains a vision for the future as opposed to a reality, largely due to the fact that the industry itself has not yet reached maturity or achieved consensus around certain standards that will enable companies to confidently deploy such a system. However, the maturing state of the industry does not mean that companies interested in UC must wait until a rip-and-replace approach seems less risky. Rather, the position of Adobe is that companies can begin laying the groundwork for a UC strategy that eases adoption as new technology becomes available. Particularly in terms of web-conferencing software, it's now possible to deploy an open, standards-based, and extensible solution that delivers some of the benefits of UC today while moving organizations down a path of future integration with all enterprise communication services.

To that end, Adobe has released Adobe Acrobat Connect Pro 7.5, featuring Universal Voice, a new capability that enables customers to integrate with any audio teleconferencing provider. Universal Voice gives companies a quick win as they look toward UC by providing greater control over an already feature-rich product. But the technology underlying this new capability—the Adobe Flash® Media Gateway—is about much more than integrating any audio teleconferencing provider: Its openness and extensibility pave the way for integration with other UC technologies that a company may want to deploy in the future.

The goal of this white paper is to introduce Universal Voice, demonstrate how it works with the Flash Media Gateway to lay the groundwork for a UC strategy, and show how the Adobe standards-based approach to Acrobat Connect Pro can benefit businesses today and tomorrow without the dangers of rip-and-replace. We will also show where Universal Voice fits in the Adobe vision for openness in UC, and share what Adobe has planned for future updates to Adobe Acrobat Connect Pro.

An industry evolves

Many organizations today use a long list of communications technologies every day: telephony, IP-based private branch exchange (IP-PBX), audio conferencing, voice mail, video conferencing, web conferencing, instant messaging (IM), e-mail, faxing, and paging. All of these systems are generally separate, coming from different vendors and deployed in different models. Each silo has its own directories, user profiles, and sets of functionality, and these silos rarely achieve more than basic integration, such as a fax number delivering faxes to a particular e-mail address.

UC providers coming into the market aim to integrate all of these services on a single, IP-based infrastructure. As a result, people will work ever more collaboratively and productively in ways that make geography and time differences disappear. It sounds like a communications utopia, and it may exist one day—but not for many years to come. To begin with, many of the systems that a UC solution would replace, such as e-mail and telephony, have become mission-critical. A rip-and-replace approach is highly disruptive to communications among employees and with customers and partners. It's also expensive and financially risky to undertake such a massive deployment at a time when business and IT expenses are receiving increased scrutiny. The industry and technology are still maturing, with standards such as Session Initiation Protocol (SIP) still evolving. For the most part, UC solutions have not yet proved their mettle, and businesses are rightfully hesitant to abandon the tools that, while siloed and separate, work well enough on their own. Existing tools allow people to use the sort of workarounds that have become commonplace and second nature, such as sending an IM to a person to ask for their phone number before placing a call rather than clicking on a “call” icon and being automatically connected 20 seconds faster.

Further, it's entirely likely that the future of UC is not in the deployment of a single solution from a single vendor, but rather in software that ties together many underlying solutions with a unified front end. This situation puts forward-thinking enterprises in something of a bind: They want to take real steps toward a UC strategy but want to avoid over-committing to a solution or set of standards that may not survive the industry's evolution.

Nevertheless, UC is on its way, and it will eventually be a boon for the way it enables people to work collaboratively and productively. And fortunately, there are ways to work toward a UC strategy without taking on risk or raising the ire of enterprise budget minders. Adobe recommends that companies begin by selecting certain solutions that are open, standards-based, and customizable. In doing so, customers can reap some of the benefits of UC as the industry continues to mature and then customize out-of-the-box functionality to bridge gaps in the meantime—all without compromising their ability to adapt to future developments in UC technology. This type of openness is where Acrobat Connect Pro excels. Universal Voice represents a step forward on a product roadmap that has openness and flexibility at its core, and makes Acrobat Connect Pro a natural place for customers to start moving down their own roadmap toward UC.

Opening up a world of choice

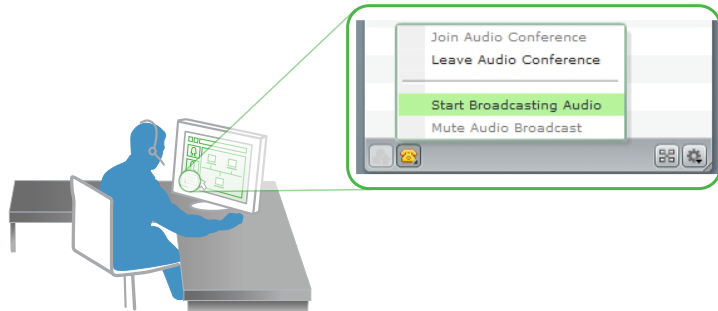
Users of Acrobat Connect Pro 7 have a rich, Flash technology-based user interface with some call controls, and they can integrate telephony-based audio with a select number of partners. But without the Universal Voice feature of Acrobat Connect Pro 7.5, the audio portion of the web conference is recorded by the audio partner, transferred back, and synced up with conference visuals after the conference. The process amounts to a complex workaround that takes time.

Universal Voice changes the way audio is integrated into web conferencing and gives Acrobat Connect Pro customers complete freedom to choose their own audio providers without relying on Adobe to develop new integration points for specific providers. Acrobat Connect Pro 7.5 provides integration points with UC and collaboration systems—user directories, audio conferencing services, SIP/SIMPLE- or XMPP-based presence and IM solutions, content repository, and collaboration portals. Its integration framework is built on a set of open and published XML-based application programming interfaces (APIs), which can federate

multiple services. The result is that Acrobat Connect Pro 7.5 allows integration with any audio conferencing platform to produce an integrated web and audio recording that can be stored in an archive accessible through Acrobat Connect Pro Central. Customers are no longer limited to audio conferencing platforms with which Acrobat Connect Pro already has preestablished integrations. In fact, customers can continue using their current provider, switch providers when business needs dictate, or even use multiple audio providers.

Acrobat Connect Pro 7.5 also allows meeting participants to listen to an audio conference from within the Acrobat Connect Pro web meeting experience without having to use a telephone. As a result, customers can also reach a wider audience without increasing audio conferencing costs by broadcasting audio through Voice over Internet Protocol (VoIP).

Universal Voice in Acrobat Connect Pro 7.5



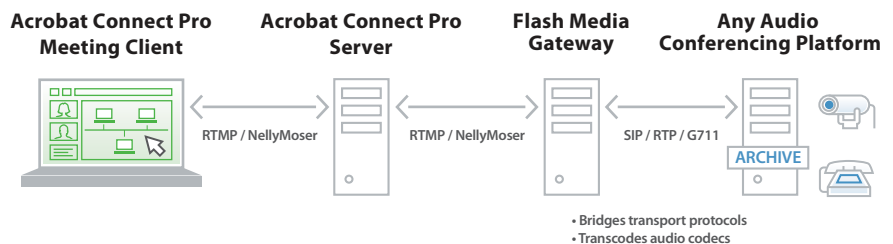
Universal Voice gives Connect Pro customers complete freedom to choose their own audio providers. Meeting participants can then listen to audio conferences from within the Acrobat Connect Pro web meeting experience without using a telephone.

Laying the groundwork for future integration

The Universal Voice feature will enable customers to exercise far more choice. But the biggest news in the release of Acrobat Connect Pro 7.5 is the technology that makes Universal Voice possible: the Flash Media Gateway, a proxy specifically for Flash protocols. The Flash Media Gateway bridges transport protocols and transcodes audio codecs, and has a highly extensible architecture built on open standards. Because of this openness, the Flash Media Gateway can integrate with any audio bridge to create an integrated audio web broadcast. In the meantime, customers have access to full API documentation, so they can build custom applications via the Adobe Flash Media Server to achieve certain specialized features that are currently not available out of the box.

The Flash Media Gateway also can support, with relative ease, new protocols that may be established in the future. A good example of this ability is a popular video compression standard, H.264. H.264 is already supported in the Adobe Flash Player, and Adobe currently has an internal proof of concept for H.264 digital video-encoding support for the Flash Media Gateway.

Flash Media Gateway capabilities



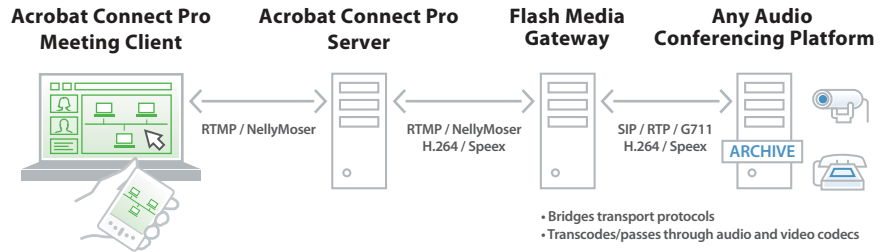
The Flash Media Gateway can integrate with any audio bridge to create an integrated audio web broadcast.

With the benefit of the Flash Media Gateway, customers will be able to take advantage of emerging standards without waiting for proprietary product releases that incorporate new standards out of the box.

Looking ahead at the Acrobat Connect Pro roadmap

Now that the Flash Media Gateway opens up Acrobat Connect Pro and enables customers to integrate with any audio provider, the next step is to build on that openness, eventually pulling in audio and video from any device. The next generation of enterprise communication and collaboration platforms will likely be an ecosystem of different services presented under a unified front end to end users, and Acrobat Connect Pro offers seamless integration and dexterity to plug into such an ecosystem.

Roadmap for Flash Media Gateway



The Flash Media Gateway roadmap includes the ability to integrate audio and video from any device into the Acrobat Connect Pro web meeting experience.

In terms of rich audio and video, the newest release of Acrobat Connect Pro lays the groundwork for features such as two-way audio in which conference participants and leaders will both be able to speak to all participants, and two-way video that will enable participants to simultaneously view organizers and participants, creating an increasingly rich, productive experience. (Users of Acrobat Connect Pro 7.5 can use the Flash Media Gateway to build their own two-way audio capability.) The Flash Media Gateway supports Real Time Messaging Protocol (RTMP), enabling Acrobat Connect Pro to participate in rich media workflows using audio and video in a standards-compliant world.

As part of Adobe Acrobat Connect Pro 7.5, Flash Media Gateway offers full dual-tone multi-frequency (DTMF)—or touch tone—support, which, through customization, allows customers to implement more in-depth integration with their own telephony platforms to meet their more specific use cases. Customers can also extend the current SIP support in Flash Media Gateway to cover a broad range of video-based scenarios in future releases.

Using Acrobat Connect Pro 7.5, customers broadcasting telephony audio to people not using their telephones no longer need to make use of a third-party recording device to capture the audio. In future releases, Adobe expects to offer the same benefits with video broadcast through Acrobat Connect Pro. Today video encoding hardware must be used to capture video from video conferencing platforms and general video broadcasts, where the video is often in digital format. It then has to be captured into Acrobat Connect Pro, often getting converted to analog and back to digital before being displayed in Acrobat Connect Pro. By taking advantage of enhancements Adobe plans to make to the Flash Media Gateway, future releases of Acrobat Connect Pro will be able to capture video and pass it straight through to Acrobat Connect Pro in H.264 format.

Reaping benefits of UC today

As a concept, UC is nothing new. But as a single, consolidated offering, it still doesn't exist in any readily deployable form. But UC is the future, and companies that neglect to develop their own UC adoption roadmaps may miss some of the early wins that will enable greater choice today and pave the way for simple integration with UC systems in the future.

For on-premise and managed services customers who have already deployed Acrobat Connect Pro, the release of Acrobat Connect Pro 7.5 represents an ideal time to upgrade to a new world of choice. It enables the selection of any audio provider at a time when all businesses are examining expenses and determining which vendors provide the most value. It also gives customers who want to extend their on-premise version the ability to envision and build their own capabilities, using the Flash Media Gateway, that don't yet exist out of the box. Hosted-service customers will also be able to leverage Universal Voice. On the hosted platform, Adobe enables integration—for no additional charge—with any audio conferencing platform that provides a toll-free dial-in. Finally, it is adaptable to future changes in standards and developments in the rapidly evolving world of UC.

For customers who are revisiting Acrobat Connect Pro or giving it careful consideration for the first time, the software provides all the security and flexibility necessary today for web conferencing and web seminars using just a web browser and the Adobe Flash Player runtime, already installed on 98% of Internet-connected computers. Requiring no downloads and offering an intuitive, lightweight interface, Acrobat Connect Pro is already the next best thing to meeting in person. But now the latest release of Acrobat Connect Pro, featuring Universal Voice powered by the Flash Media Gateway, represents a significant step down a path toward UC.

