



Building The “Ideal” **Wireless Collaboration Platform**

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Right now, the hottest trend in the audiovisual marketplace is 'collaboration,' with a slew of products offered for sale that promise better, more engaging meetings by seamlessly connecting together everything from laptops to tablets, smartphones, and video/audio conferencing links. Each manufacturer does it differently, yet each of them insists their collaboration product is the most user-friendly.

Unlike other technologies that build upon some sort of industry-standard architecture, collaboration systems are attempting to define standards as they go along. Some platforms exist simply to enable wireless presentations and nothing more, while others are designed with static images in mind at the expense of smooth video playback. Some implement iOS mirroring for Apple products; others don't. And security is almost an afterthought on the majority of collaboration products.

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For a potential customer, the collaboration landscape couldn't be more confusing. There's no specific checklist of features to guide you in your purchase decision, and even if there was, how would you know which features really matter, and which don't? No 'rules of thumb' for collaboration systems exist, and it's far too easy to lose your way in the blizzard of marketing and advertising hype.

Perhaps the best strategy for choosing a wireless collaboration platform is to draw up your own checklist of features, based on your real-world needs and wants. The fact is; the success or failure of a collaboration product will be determined by its software implementation, not its hardware. And any collaboration product that provides real value will base its feature set on the functions that meeting participants actually use on a regular basis – not 'nice to have' bells and whistles that look good on a sell sheet.

What You Really Need

Let's face it - there wouldn't be a market for collaboration products if it wasn't for the widespread adoption of tablets and smartphones. Millions and millions of these gadgets are in use every day, traveling to meetings, classes, seminars, lectures, and even informal 'ad hoc' small group sessions, also known as 'huddles.'

The appeal of BYODs lies in their being true plug-and-play devices. Just power them up and launch an app – that's all there is to it. There's no reason why our "ideal" collaboration platform can't be just as easy to use. Plus, all BYODs have Wi-Fi radios built-in and support Transport Control Protocol / Internet Protocol (TCP/IP), which is what enabled the launch of collaboration products in the first place.

So the first thing our collaboration platform should do is allow for quick and easy log-ins from any computer, tablet, or smartphone; either from an app, an executable file, or a virtual client. And it should support a large number of users equal to the largest block of IP addresses it can assign.

Once everyone's logged into the meeting, any participant (not just the moderator) should be able to share what's displayed on their device's screen to the main meeting screen. And it's a two-way street: All participants should be able to view whatever's on the main screen on their own device, no matter how large or small its screen is. You see what you need to see, where you need to see it. As a bonus, why not include full iOS mirroring, so that every function on your Apple tablet or phone is reflected on the main meeting screen?



While we're at it, how about showing and sharing two, three, or more participant screens simultaneously? Given the low cost of projectors and large, HD direct-view displays as well as image tiling processors, there's no reason why we can't easily show four, five, and even six simultaneous images on every screen, re-sized and tiled automatically by our collaboration hub.

Now we're starting to see a very useful collaboration platform emerge. But we're not done yet. Video has become a very popular and useful part of meetings, but it often gets short shrift with collaboration hardware. Video playback is usually a herky-jerky process with dropped frames and annoying pauses for buffering. Not surprisingly, video streaming problems are still the #1 complaint of end users of collaboration hubs, particularly in the higher education market.

Enough! Let's fix that once and for all with smooth, uninterrupted 1080p/60 video playback from any connected device to the main screen from multiple platforms – Windows, Apple, and Android. And this will happen over conventional TCP/IP wired and wireless network connections, with no special protocols required. (It is 2015, after all...)

Don't Forget These



In this day and age of sophisticated Internet hacks and data breaches, having strong encryption and security on a collaboration platform isn't a 'nice to have' feature – it's a 'must have,' as far as your IT department is concerned. So we'll build up a strong firewall by adding 1024-bit encryption to every logged-in presenter's connection.

And we'll further increase security by requiring an alphanumeric room code for every log-in; one that changes dynamically at regular intervals to keep out unauthorized users.

Security is priority number one for every installation. If you don't have secure connections between your source devices and the wireless collaboration hub, then you are jeopardizing the company (and possibly your job!) by leaving your content open to hacking.

Hmmm...our ideal collaboration platform is starting to look pretty good! It's packed with essential features and provides robust security for all users. But there's still room for improvement. How about a few more features to help us collaborate in a productive meeting environment?

Every meeting has its share of sidebar conversations – you can't avoid them. And they can become really annoying, even if people try to keep their voices down. So let's add a 'chat' feature to our platform, allowing any meeting participant to converse with one or more of their colleagues and not disrupt the presenter.

Better yet, let's also include an automated workflow function, so anyone can send one or more participants a file (or files) during the meeting; again without disrupting the current presentation.

Today's innovative huddle spaces, modern classrooms, and conference rooms certainly benefit from everything we are including in our ideal collaboration platform. But let's not forget about virtual meeting participants – how can we connect to them? Since video conferencing is such an essential part of any meeting, third-party videoconferencing applications such as Skype, Lync, WebEx and GoToMeeting should be added to our platform.

How about working as a team on a single file, a document, spreadsheet, or a presentation? Pre-loaded, third-party office productivity software should be a part of our tool kit. Now, our ideal collaboration platform can display any file– documents, spreadsheets, slides, photos – from any participant, logged in from any device.

Now, anyone can enter a meeting with a tablet without files or software loaded on that device and still collaborate effectively on a project. Our ideal collaboration platform brings cloud-based storage to the meeting space, bridging the gap between BYOD devices and the final work product.

If we add some USB ports to our ideal wireless collaboration hub, we can leverage third-party apps even further by connecting remote controls, web cameras, external mice, keyboards, portable storage, and more.

Let's top things off with an electronic whiteboard, so we can allow one or more participants to draw, outline, annotate, edit, highlight, and otherwise markup whatever's on the main screen (even a frame of video!) and save a copy of it for all participants.



That's More Like It

Now, let's take a step back and look at our finished design. We've built a true collaboration platform that is really designed for end users; not for engineers who appreciate technical complexity. Our platform seamlessly mixes and matches apps, protocols, image processing, and interactivity to best advantage, and is just a smarter approach than other collaboration products offered today. It runs quietly, powerfully, and transparently in the background while meetings take place.

What's more, our collaboration platform is scalable. We can enhance our platform's capabilities with AV switching and distribution equipment. We can connect multiple digital displays and video sources. We can add wireless HDMI outputs from our collaboration platform to connect displays located in huddle spaces, which are often located in large rooms with high ceilings and no walls.

Best of all, our collaboration platform is agnostic: Computers and BYODs that use Mac Os, Android, or Windows operating systems will all work equally well. File sharing, sidebar chats, annotation, and exchanging ideas happen spontaneously just as they would in any meeting, all in a totally interactive and secure environment.

A black and white photograph of a diverse group of five professionals (three men and two women) gathered around a wooden table in a modern office setting. They are all smiling and looking at laptops, suggesting a collaborative work environment. A thick red horizontal line is positioned above the text.

Now, that's true collaboration!



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