Video Interop in the Hybrid Work Environment

How interoperability decisions impact your workers every day.

Version 3 (January 2023)

RECON RESEARCH

webex by CISCO

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Hybrid work is about letting your staff choose how they want to work !

Introduction

The “new” way of working is not about where you work. And it’s not about using a specific application or service.

It’s about creating simple and engaging experiences that motivate your staff.

It’s about enabling your team to contribute and participate effectively.

It’s about fostering an inclusive environment that is equally accessible to everyone.

But most of all, it’s about letting your people work …

- *where they want*
- *how they want*
- *using the tools they prefer*

What’s the common theme?

The new way of working (a.k.a. the hybrid work environment) is about using technology to empower employees to **choose** how they want to work.

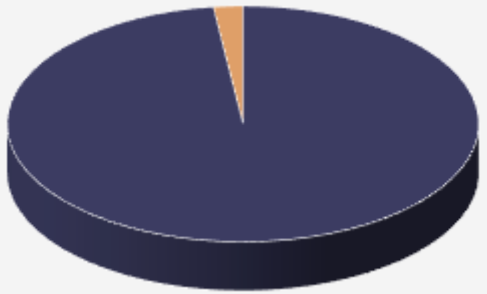
The Hybrid Work Environment

How are companies meeting the hybrid work expectations of their global workforce?

That's easy ...

VIDEO CONFERENCING

- By providing workers with powerful virtual meeting tools
- By creating more video-enabled workspaces in their offices
- By making almost every meeting a virtual meeting
- By treating in-office and remote workers as meeting equals – all the time



98%

of all meetings will have at least one remote participant *

* Source: https://www.cisco.com/

The Interop Challenge

Today's video conferencing solutions are reliable, affordable, and amazingly powerful.

So, what's the problem?

VIDEO INTEROPERABILITY

*Video interoperability issues can **significantly** impact the meeting experience.*

Not all video conferencing systems can communicate with each other.

Even solutions that do "interoperate" often provide a compromised user experience (non-intuitive workflow, marginal audio/video quality, limited features., etc.).

Imagine that.

Interop Challenge Examples

EXAMPLE #1

A pharmaceutical company uses one video conferencing platform in London and a different platform in New York.

As a result, calls between this company's locations are complex to initiate and lack some key features.

EXAMPLE #2

A law firm makes and joins video calls with clients using different video platforms.

This causes frequent meeting delays (and even failures) and impacts day-to-day business.

This is the reality of today's

VIDEO INTEROPERABILITY

*Interop challenges impact both internal meetings **and** meetings with externals.*

*Not all video interop approaches and solutions were created **equal**.*

Solving Interop Issues

Good News! There are many ways to solve video interoperability issues.

But beware --- with video interop, the details matter …

- *Some work with specific systems or platforms only*
- *Some involve additional costs (upfront or recurring)*
- *Some depend on additional products or services*
- *Some add significant complexity*
- *Some impact monitoring and management capabilities*
- *Some force users to bring laptops to the meeting rooms*

And some approaches provide basic interoperability only, resulting in a compromised overall experience.

The next section highlights the pros and cons of common video interop approaches available today.

Some video interop approaches add cost and provide a compromised user experience.

Approach #1
The Corporate Mandate

One option is to compel EVERYONE to use the same video conferencing platform or service. This is the dreaded corporate edict.

PROS

- Low cost (unless new systems must be purchased)
- Simplifies the meeting room estate
- Provides a consistent user experience and workflow
- Streamlines management of the video environment
- Avoids potential security issues during inter-platform calls

CONS

- Feels old-school and dictatorial
- May force users to abandon the platforms they know and like
- Such policies are difficult or even impossible to enforce
- May cause rogue deployments of users refusing to shift
- Addresses internal interop issues only (does not ensure successful calls with partners, clients, and prospects)

REALITY

For many reasons (technical, political, managerial), this approach does not work in most companies.

REALITY

This approach offers strong flexibility, but due to its trade-offs, many companies have not embraced BYOD.

Approach #2
Host Your Own Meeting (BYOD)

This approach uses a participant's laptop to host a video meeting in a meeting room.

PROS

- Supports almost any video collaboration app or platform
- Utilizes the meeting room's camera, mics, and speakers
- Offers strong usability for those familiar with personal apps
- Provides obsolescence protection

CONS

- Only works with BYOD-capable video solutions
- Requires "host" participant's laptop and takes over that laptop for the duration of the session
- Depends on the laptop's mic, speaker, and camera settings
- Uses apps optimized for personal use (not meeting room use)
- Each desktop app uses its "native" UI (confuses some users)
- Some meeting controls available on the host's laptop only
- Unlikely to support dual-display or multi-camera experience
- Offers limited (if any) remote monitoring and management

Approach #3
The Meeting Room PC

This approach involves the use of a desktop PC running multiple apps in the meeting room.

PROS

- Supports almost any video collaboration app or platform
- Utilizes the meeting room's camera, mics, and speakers
- Offers strong usability for those familiar with personal apps
- Supports use of shared login (easy for users) or personal login (provides access to user's files, contacts, etc.)
- Provides obsolescence protection

CONS

- Requires the installation and upkeep of a meeting room PC
- Requires BYOD-ready AV devices in the meeting room
- Uses apps optimized for personal (not meeting room) use
- Each desktop app uses its "native" UI (confuses some users)
- Often provides a compromised meeting join workflow (even when launcher apps are used)
- Need to log in to PC causes delays, security concerns, etc.
- Offers limited (if any) remote monitoring and management

REALITY

The need to buy, install, and manage a shared meeting room PC and related security concerns make this approach less interesting for many organizations.

REALITY

This approach adds flexibility, but is often too expensive and complex for large-scale deployments.

Approach #4
Integrated AV Meeting Room

This approach uses additional AV equipment to add BYOD or multiplatform support in the meeting room.

PROS

- Allows rooms to support multiple video apps / platforms
- Adds flexibility to existing meeting rooms and systems
- Can be customized to meet specific feature & workflow needs

CONS

- Adds significant additional cost and complexity
- Requires the installation of additional devices in the room
- Typically involves custom designs and professional installation
- May require an AV control system to make the system “usable”
- Often takes weeks or months (or longer) to install

Approach #5
Video Conferencing Standards

Following defined standards (SIP / H.323) allows interoperability between systems and platforms.

PROS

- Leverages long-standing, field-proven comms protocols
- Allows calls with legacy video systems and platforms
- Supported by many video conferencing products/platforms
- May allow direct (system to system) communications if both systems support the chosen standard

CONS

- Not all systems and platforms support standards
- Not all standards implementations are the same (some interop issues may remain)
- Some usability and experience features are not covered by the standards (provides a basic interop experience only)

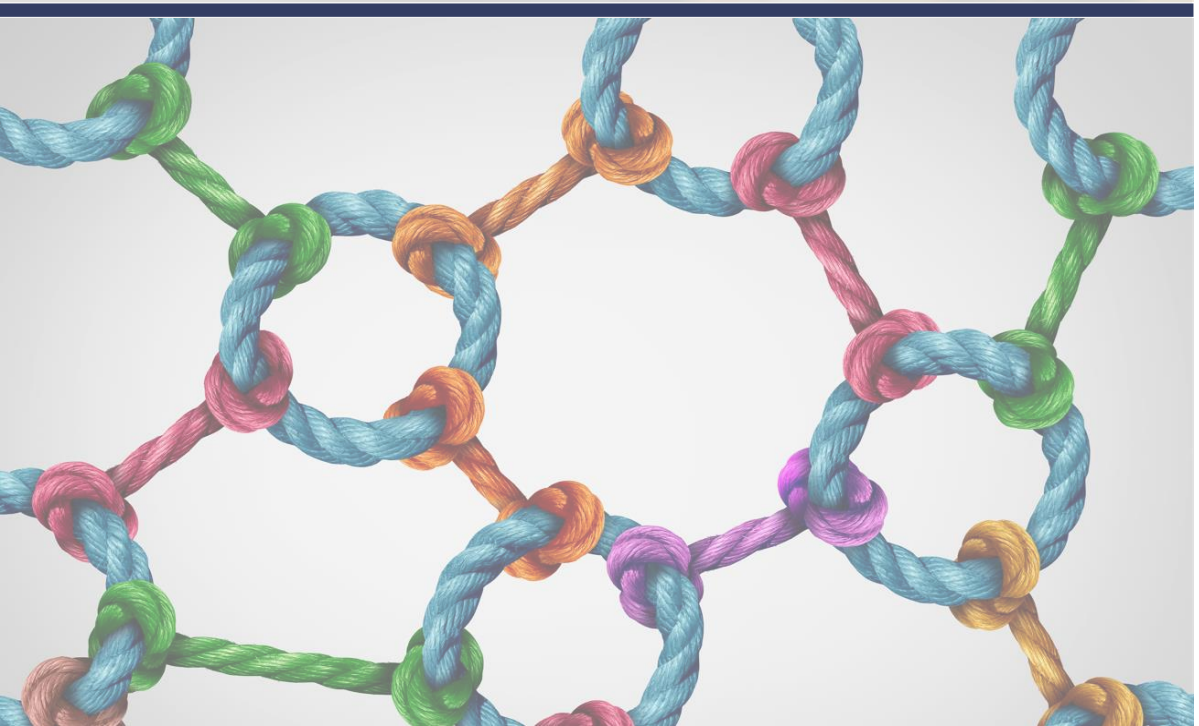
REALITY

Video conferencing standards promote interoperability, but not all systems and platforms support standards.

Also, using standards may limit the available features and the overall user experience.

REALITY

WebRTC is a relatively modern communication standard, but workflow, user interface, and the overall user experience provided varies by vendor and platform.



Approach #6 WebRTC

WebRTC is designed to simplify adding real-time communications (RTC) to web browsers.

PROS

- Supported by many leading video calling platforms (e.g., Cisco, Google, Microsoft, and Zoom)
- Supported by some current-generation video systems (depending on device and platform in use)
- Typically offers an easy meeting join workflow
- Doesn't typically require additional gateways or licenses

CONS

- Not all systems or platforms support WebRTC
- Typically uses guest access to join meetings, which may impact workflow (based on security settings) and available features
- User interface varies between vendors / platforms
- Quality of experience depends on each vendor's WebRTC implementation within their device and platform / service.

Approach #7
Gateway Services

Gateway services let video systems and users dial into meetings on incompatible platforms.

PROS

- No hardware to purchase or install
- Relatively quick to deploy
- Gateway service is managed by others
- Accessible to the entire company (not just one user or room)
- Lets participants use the native UI of their chosen platform

CONS

- Adds additional cost (usually a monthly or annual fee)
- Typically supports dial-in only (not dial-out-from meetings)
- Available for some platforms only (e.g., Meet, Teams)
- May require some initial configuration / integration
- May impact scheduling or join workflow
- May introduce compromises (call quality, layouts, features)
- May not be acceptable to organizations unwilling or unable to use cloud services (e.g., for security reasons)

REALITY

Gateway services open some normally closed platforms, but this flexibility comes at a cost (financial, features, experience).

Also, only a limited number of gateway services are available today.

REALITY

Supporting multiple apps / platforms on the same device makes perfect sense.

Most video systems do not currently support ad-hoc switching between apps.

In this case, the fine print matters!

Approach #8
App Switching

Some video conferencing systems / video bars support multiple collaboration apps & platforms.

Recon Research calls this "App Switching."

PROS

- Allows same device to support multiple apps / platforms
- May include BYOD support (depends on the device/app in use)
- Ability to change platforms gives obsolescence protection
- Offers "native" experience on each supported platform
- Does not depend on additional hardware or gateway services

CONS

- May only support specific "approved" video apps and platforms
- Customer may need licenses for each app / platform
- Changing platforms may take time, require reboot or admin
- Each app uses its "native" UI (may confuse some users)
- Using multiple apps / platforms may complicate management (e.g., capturing/analyzing usage data, resolving issues, etc.)

Making Good Interop Decisions

There are many ways to avoid interop issues.

To make informed decisions, customers should:

THINK about who your users need to meet with (colleagues, partners, clients) over video

FOCUS on making things quick, simple, and consistent

PRIORITIZE the meeting experience (video/audio quality, meeting join workflow, supported features)

UNDERSTAND the cost impact and limitations of each approach

SEEK solutions that offer strong security & management

CONSIDER today's & tomorrow's interop requirements

TAKE the simplest approach (Occam's Razor applies)

REMEMBER – The right solution may be a combination of multiple approaches

Summary

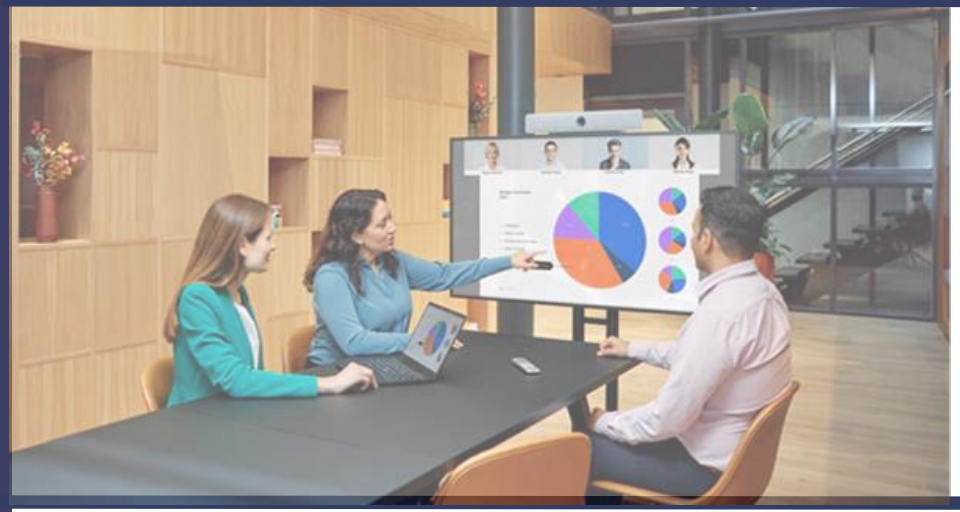
Companies should look for video conferencing products and services that support the right *combination* of interop *approaches* to address their specific needs.

For most companies, video interop is NOT a one-size-fits-all discussion.

Solution Spotlight

The sponsor of this eBook (Cisco Systems) supports many of the interop approaches described above.

One Ecosystem – Many Approaches



BYOD / USB Passthrough

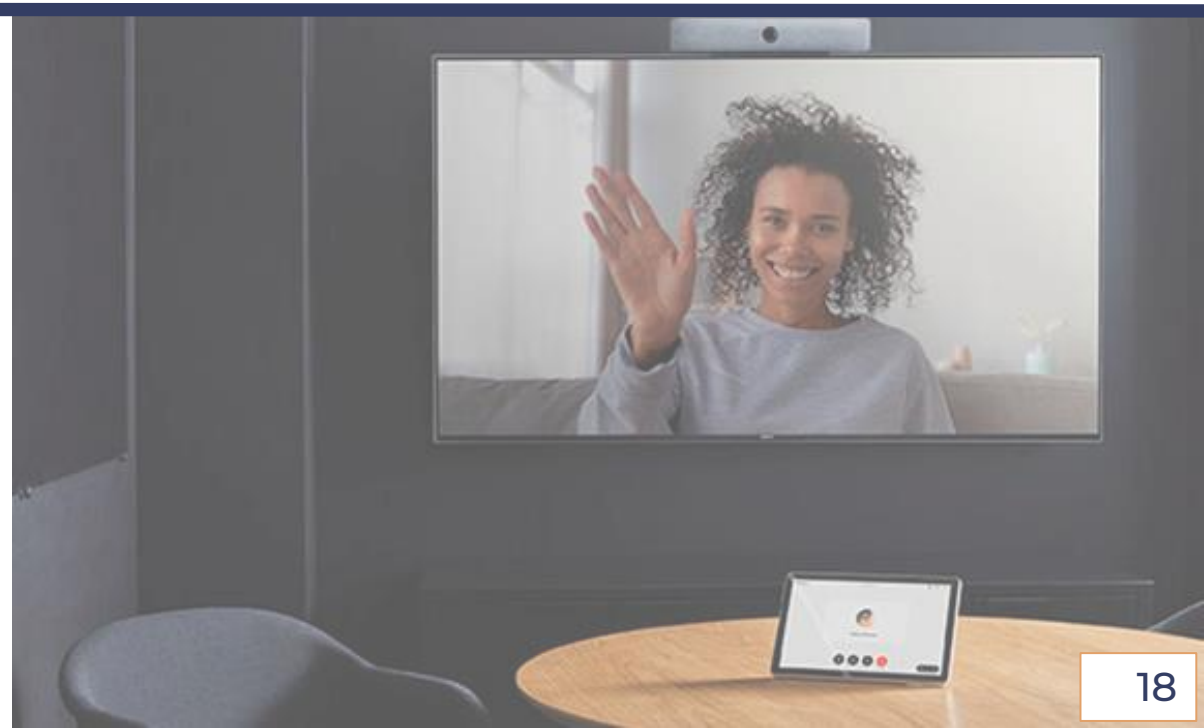
All currently available Room, Board, and Desk video systems from Cisco support BYOD (natively or using an external INOGENI HDMI to USB Adapter).

This native BYOD support allows meeting room users to host and join meetings on almost any platform.

Video Conferencing Standards

All Room, Board, and Desk video systems from Cisco, and the Webex cloud service, offer bi-directional SIP and H.323 support without the need for additional licenses or gateways.

This native SIP / H.323 support lets Cisco video systems join meetings on other platforms (and vice-versa).



One Ecosystem – Many Approaches

Gateway Service

The “Cisco Webex Video Integration for Microsoft Teams” (or VIMT) cloud service lets Webex customers with the proper license dial into Microsoft Teams meetings using SIP.

WebRTC Support

Cisco’s WebRTC support let’s Cisco Rooms devices:

- Join scheduled Microsoft Teams meetings with “one-button-to-push” on a Cisco touch panel
- Join scheduled Google Meet meetings using “one-button-to-push” and dial into Google Meet Meetings

Google Meet Systems can also join Webex meetings.

One Ecosystem – Many Approaches

App Switching (MTR Support)

(Expected Availability in Q1 2023)

Room Kit Pro, Room Bar, Board Pro, and Desk Pro systems will run the standard Microsoft Teams Rooms (MTR) app and the Webex app (see photos at right).

This MTR support will allow these Cisco devices to provide a native, full-featured Microsoft Teams experience.*

While operating in MTR mode, calls into Webex meetings will use the standard Webex app and provide a native Webex experience.

While operating in Webex mode, calls into Teams meetings will provide a WebRTC or Cisco CVI / VIMT gateway interop experience.

Cisco will be the first vendor offering devices that support native Teams and Webex calls without admin support or a reboot!

BONUS – Cisco video systems can be monitored & managed by Webex Control Hub in both Webex and MTR operating modes.

* A Microsoft Teams Room license is required for these video systems.

Recon Research – Test Results

Recon Research conducted extensive interop testing between numerous video conferencing devices and the leading video calling services and platforms.

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This hands-on testing confirmed that Cisco's support for various interop approaches (USB passthrough, SIP / H.323, WebRTC, and Gateway services) enables video calling with a wide range of third-party products and services. *

Cisco Supports A Wide Range Of Video Interoperability Approaches

* This effort did not include hands-on testing of Cisco's Microsoft Teams gateway service or soon-to-be-released MTR support.

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