SYNERGY SKY

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The Platform-Independent Meeting Room

How to make existing video rooms work across Teams, Zoom, Webex, Google Meet, and FaceTime

Target Audience

IT and Business Decision-Makers evaluating meeting room interoperability, hardware lifecycle management, or cross-platform collaboration strategies.

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Executive Summary

The modern meeting room faces a critical challenge: collaboration is now fluid and multi-platform, but traditional video hardware is not. Users expect to walk into any room and instantly join a meeting, whether it is hosted on Microsoft Teams, Zoom, Webex, Google Meet, or another platform.

For IT, AV, and collaboration teams, bridging this gap has historically forced a difficult choice: accept limited, fragmented meeting experiences or undergo a massive rip-and-replace of functional equipment. Many organizations already own reliable, high-quality SIP video conferencing systems from vendors such as Cisco and Poly. Discarding these premium systems simply because meeting software has evolved is costly, highly disruptive, and generates unnecessary electronic waste.

Synergy SKY CONNECT was built to eliminate that compromise.

As a vendor-neutral Universal Gateway, CONNECT enables existing SIP-capable video devices and Zoom Rooms to seamlessly join meetings across Microsoft Teams, Zoom, Webex, Google Meet, and Apple FaceTime. It effectively separates the meeting platform from the room hardware, allowing organizations to maintain absolute investment protection over their current AV estate.

Synergy SKY CONNECT maximizes the value of any SIP video system, unlocking the full potential of both your current infrastructure and your next-generation hardware investments. By seamlessly bridging these devices into any meeting platform, users retain a familiar and frictionless workflow.

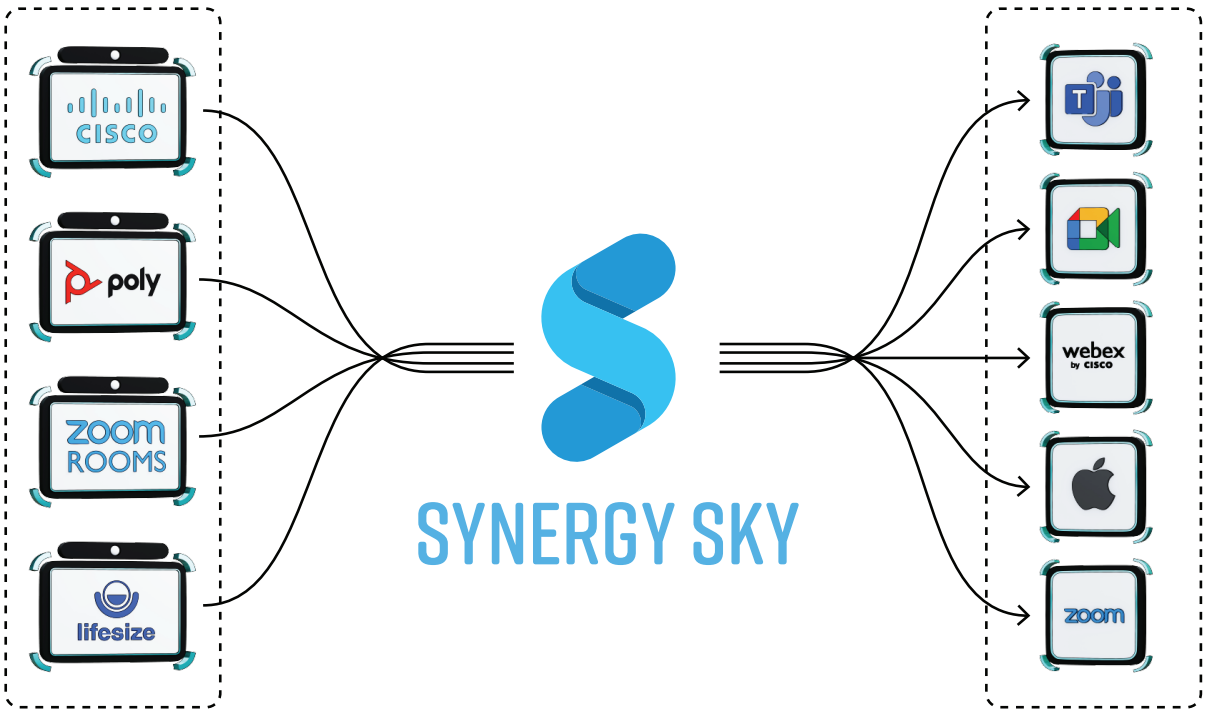
This whitepaper details why platform interoperability remains complex, what criteria organizations should demand from a modern solution, and how Synergy SKY CONNECT transforms existing rooms into truly platform-independent collaboration spaces.

The better question is not:

"Which meeting platform should all rooms standardize on?"

The better question is:

"How can our rooms join the meetings our users actually need to attend?"



The new meeting reality

01. Every organization is multi-platform

The meeting platform no longer belongs only to the host organization.

What happens when your organization standardizes on Microsoft Teams, but a customer, supplier, or partner invites you to a meeting on Google Meet, Zoom, Webex, or another platform your room does not natively support?

That question now defines the modern meeting room challenge. The room must support more than the platform chosen by IT. It must support the meetings users are actually invited to.

For many enterprises, the existing meeting room estate is too valuable to discard. SIP-capable systems often include high-quality cameras, microphones, speakers, displays, control panels, and established user workflows. A space designed to enhance the meeting experience. Replacing these systems simply because meeting platforms have changed is costly, disruptive, and often unnecessary.

02. Why meeting room interoperability remains difficult

The challenge exists because traditional video rooms and common web meeting platforms were built for different worlds.

SIP-capable video systems are based on open, standards-based communication. Meeting platforms are optimized for software clients, cloud services, browser experiences, and platform-specific features.

That gap is why a room can be technically excellent yet still struggle to join the meeting in front of it. Video, audio, and signaling may rely on different protocols, while meeting invitations, join methods, layouts, content sharing, captions, chat, reactions, and participant controls differ across platforms.

For some organizations, the challenge goes even deeper. In government and high-compliance environments, interoperability may also mean communicating within, between, and into separate cloud environments. Microsoft Teams, for example, can exist in separate environments such as Commercial, GCC, GCC High, and DoD. These environments are intentionally separated for security and compliance reasons, but that separation can make collaboration difficult even when both parties are using Teams.

Organizations need rooms that can join and participate in the meetings their users are actually invited to, across platforms, tenants, and cloud environments.

03. What are the limitations of common meeting room interoperability approaches?

Organizations typically attempt to solve multi-platform meeting challenges using Native Room Systems, Cloud Video Interop (CVI), Direct Guest Join, or complete Rip-and-Replace hardware strategies. While these methods can be useful in isolated contexts, they inherently limit flexibility by locking users into single platforms, delivering inconsistent meeting experiences, or generating unnecessary costs and electronic waste.

Why do Native Room Systems struggle with external meetings?

Native room systems deliver an excellent experience only when the meeting is hosted on the exact same platform as the hardware. A Teams Room is strong in Teams, a Zoom Room is strong in Zoom, and a Webex room is strong in Webex. The workflow breaks down the moment a user needs to join an external meeting hosted on a different platform.

What is the main limitation of Cloud Video Interop (CVI)?

Cloud Video Interop (CVI) allows standards-based video systems to join Microsoft Teams meetings. While this solves an important problem for organizations focused exclusively on the Microsoft ecosystem, its critical limitation is scope: CVI is designed solely for Teams meetings and does not support multi-platform reality.

Does Direct Guest Join provide a full meeting experience?

Direct Guest Join allows certain room systems to connect to other major platforms using embedded, browser-based methods. However, users typically receive a reduced version of the meeting experience compared to a native client. The quality and feature support are often inconsistent, varying heavily by endpoint hardware, software version, and the target meeting platform.

Why is a "Rip-and-Replace" hardware strategy bad for business?

Replacing an entire estate of geographically distributed video rooms creates immense cost and operational complexity far beyond the price of the new endpoints.

- **Operational Disruption:** It requires procurement, shipping, physical installation, local access, and
- extensive user retraining.

- **Sustainability Impact**: Discarding high-quality, functioning audio and video systems simply because meeting platforms have changed creates massive, unnecessary e-waste.

A more sustainable, cost-effective strategy is to do no harm: keep the existing rooms that work, avoid disruption, and integrate a Universal Gateway to provide interoperability where it is needed.

04. What modern interoperability should deliver

A modern interoperability solution should not merely connect calls. It should make meeting rooms usable across the platforms people actually use.

That means it should deliver several outcomes.

Multi-platform reach

Rooms should be able to join meetings across Microsoft Teams, Zoom, Webex, Google Meet, Apple FaceTime, and other supported platforms without requiring a different solution for each meeting type.

Existing room compatibility

Organizations should be able to preserve the value of existing SIP-capable room systems where those systems still meet the needs of the room.

A consistent user experience across platforms

Users should not need to learn one workflow for Teams, another for Zoom, and a third for Google Meet.

With CONNECT, the joining experience remains consistent across supported meeting platforms.

The same principle applies once the meeting has started. Users should be able to share presentations and interact with the meeting from the room in a familiar way, regardless of which platform is hosting the meeting.

Richer in-meeting participation

Basic interoperability is no longer enough. A room that can only send and receive audio and video may technically be connected, but users are still separated from much of the meeting experience.

Modern meetings are interactive. Participants raise hands, follow live captions, change layouts, view participants, use chat, share content, and react in real time. When these capabilities are unavailable from the room, users often fall back to laptops, parallel joins, or workarounds.

Synergy SKY CONNECT addresses this through TrueView Engage, which gives users access to supported in-meeting controls and interactions from SIP-capable video rooms. The result is a more complete meeting experience, where the room can participate more like a native meeting client rather than a basic guest connection.

Why is vendor neutrality critical for meeting room interoperability?

Many interoperability solutions route calls through their own competing ecosystems. This often forces users to learn a new interface, alters the routing architecture, and strips away the native capabilities of the target meeting platform.

CONNECT takes a fundamentally different approach. Because it operates strictly as an invisible Universal Gateway, it delivers three distinct advantages for the enterprise:

- **Unchanged Endpoint Experience:** The joining workflow on high-quality SIP devices, such as Cisco or Poly, remains exactly as the manufacturer intended.
- **Native Meeting Capabilities:** The in-meeting experience is delivered exactly as the target platform designed it. CONNECT does not interfere with or alter the native interface.
- **Partner and Ecosystem Safety:** Because CONNECT does not introduce a competing platform, it is an entirely safe solution for AV integrators and vendor representatives to recommend. When native vendor solutions cannot cover every multi-platform scenario, CONNECT invisibly bridges the gap without disrupting the primary vendor's ecosystem.

Flexible deployment
Organizations should be able to choose the deployment model that fits their security, operational, and compliance needs: cloud, hybrid, or on-premises.

Operational simplicity
The solution should be easy to deploy, manage, license, and scale. A room-based model is easier for many organizations to understand than a patchwork of platform-specific licenses and exceptions.

Simple room-based licensing
Interoperability should be easy to understand and easy to calculate.
With CONNECT, licensing is based on the room, not on a separate license for each meeting platform.
That makes planning simpler for organizations that need to join more than one type of meeting.
Instead of evaluating separate costs for each platform supported.

Security and governance
Interoperability should not come at the expense of security. Organizations need a clear understanding of architecture, media handling, encryption, access, data processing, and administrative control.

05. How Synergy SKY CONNECT works

For a deep architectural analysis of the server-side container orchestration and protocol translation, see Appendix A.

Synergy SKY CONNECT is designed as a platform-independent interoperability layer between existing video rooms and modern web meetings.

At a high level, CONNECT bridges the gap between SIP-capable video devices and web meeting platforms. It gives the room a standards-based path into the meeting while handling the complexity of the target platform behind the scenes.

The process can be understood in five steps:

1. **The meeting is identified**
   A meeting may be found through a calendar integration, entered by meeting ID, scanned from a mobile device, or provided through an integration. CONNECT identifies the meeting type and the information needed to join.

2. **A SIP path is created**
   CONNECT creates a SIP address that the room system can dial. This allows the existing video device to use the standards-based calling behavior it already supports.

3. **The room joins the meeting**
   The SIP-capable room dials into CONNECT, either through a scheduled join button, manual meeting ID workflow, scan-to-join experience, or other supported methods.

4. **CONNECT bridges the two worlds**
   CONNECT handles the real-time interoperability between the SIP room and the target web meeting. The user remains in the familiar room environment, while CONNECT manages the translation between the room system and the meeting platform.

5. **Users participate with modern meeting capabilities**
   Beyond basic audio and video, CONNECT is designed to support richer meeting participation, including content sharing, captions, in-meeting interactions, and layouts where supported.

The goal is simple: make the room feel like it belongs in the meeting, regardless of what platform the meeting is hosted on.

6. Joining workflows: one solution, multiple ways to enter the meeting

Different meetings require different joining experiences. CONNECT supports several workflows so organizations can match the experience to the room, the device, and the user scenario.

Click to JOIN

Click to JOIN enables users to join scheduled meetings from the room with a simple one-click workflow. For users, this is the familiar “green button” experience: walk into the room, see the meeting, press join.

This workflow is especially valuable for recurring meetings, executive rooms, boardrooms, training rooms, and shared spaces where reliability and simplicity matter.

JOIN by ID

Not every meeting is scheduled in the room calendar. Join by ID allows users to enter the native meeting ID and join the meeting directly.

This is useful for ad hoc meetings, external invitations, last-minute calls, and cases where the meeting was not processed through the normal calendar workflow.

Scan to JOIN

Scan to Join gives users a mobile-assisted way to connect any SIP device to a meeting.

The user first dials a fixed URI from the SIP device. A unique QR code appears on the room screen. The user scans the QR code, swipes, and selects the meeting from their phone. The SIP device then automatically connects to the selected meeting.

This gives users a simple “scan, swipe, connect” workflow without changing the room system or requiring a different process for each meeting platform.

Together, these workflows help reduce the number of “how do I join this meeting?” moments that create frustration for users and support tickets for IT.

7. The in-meeting experience: More than a video bridge

Basic interoperability is no longer enough.

Users have become accustomed to richer meeting experiences. They expect to see participants clearly, share content, respond with reactions, raise a hand, follow captions, and interact with the meeting without switching devices or abandoning the room experience.

CONNECT is designed to bring more of that modern meeting experience to SIP-capable rooms.

Depending on platform and configuration, CONNECT can support capabilities such as:

- Native-style meeting layouts through TrueView
- Raise hand
- Layout changes
- Participant list access
- Chat pane access
- Sending and seeing emojis
- Live captions in supported meeting types
- HDMI and wireless presentations sharing
- PowerPoint Live and whiteboarding support where available

This matters because the role of meeting room is no longer just a camera and microphone. It is a collaboration endpoint

A better room experience keeps people focused on the meeting, not the mechanics.

8. Deployment options for enterprise and government

For comprehensive details on cross-cloud routing, data isolation, and federal compliance architecture, see Section 8 capabilities expanded in Appendix B.

No single deployment model fits every organization.

CONNECT supports flexible deployment models, including cloud, hybrid, and on-premises options.

This flexibility is especially important for organizations with security, sovereignty, regulatory, or government requirements. In public sector and defense-related environments, interoperability must often work across different Microsoft cloud environments, tenants, and external organizations without compromising control.

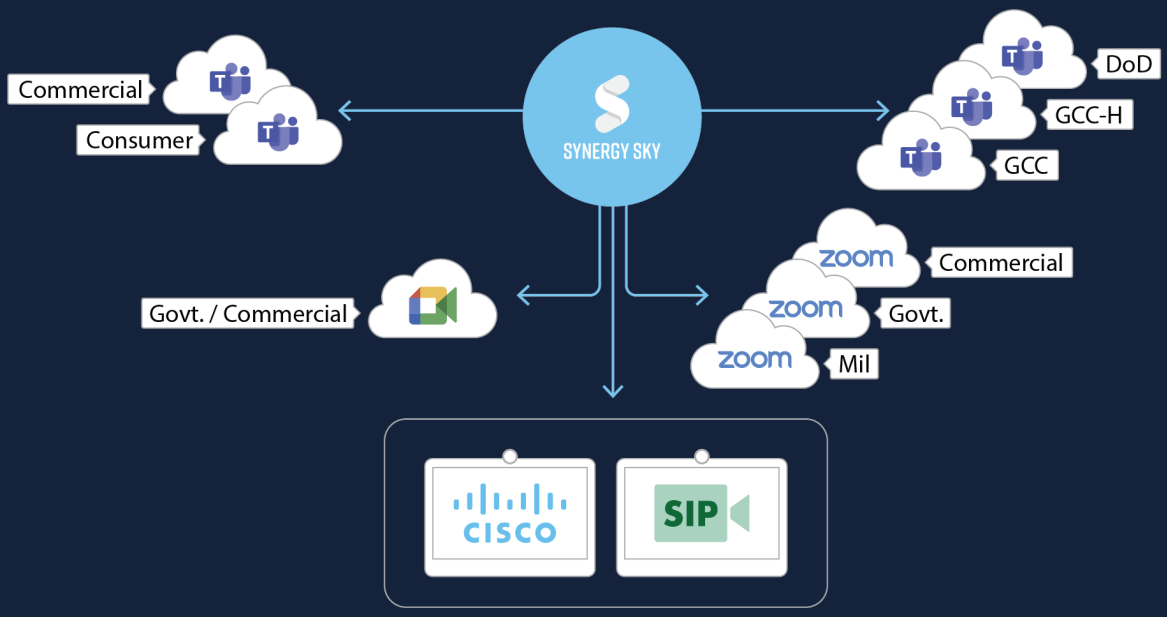
For these organizations, the question is not simply whether a room can join a meeting. The question is whether the architecture can meet operational and compliance requirements while still giving users a practical way to collaborate.

Special case

Any Cloud collaboration in federal environments

In federal and defense environments, interoperability is not only a multi-platform problem. It is also a multi-cloud problem.

A user may need to join a meeting hosted in another Microsoft cloud, another tenant, or another security domain. For example, one organization may operate in Microsoft Commercial while another operates in GCC High or DoD. Traditional interoperability approaches can struggle in these scenarios because cloud boundaries and tenant restrictions are part of the security model.



Synergy SKY CONNECT for Government is designed to address this challenge by enabling video rooms to join meetings across supported cloud environments without requiring the room system to be locked into the same tenant or cloud as the meeting host. For organizations that collaborate with agencies, defense contractors, suppliers, and mission partners, this helps make secure cross-cloud collaboration practical from existing video rooms.

9. Preserving existing investments

Meeting rooms are capital-intensive environments.

A room system is not just a codec or a screen. It includes cameras, microphones, speakers, displays, cabling, control panels, scheduling panels, furniture, acoustic treatment, support processes, and user habits.

When an organization replaces a room system prematurely, it often replaces more than hardware. It replaces workflows, training, support models, and operational stability.

CONNECT helps organizations take a different path: keep the rooms that work, and make them useful in the modern meeting landscape.

This approach can help organizations:

- Extend the life of existing video investments
- Reduce unnecessary hardware replacement
- Support mixed estates across vendors and generations
- Improve external meeting participation
- Standardize the joining experience across meeting types
- Reduce user confusion and meeting delays
- Give IT and AV teams a more scalable interoperability model

The result is not only a cost-conscious solution, it is a more resilient meeting strategy.

10. Evaluation checklist: Choosing an interoperability strategy

When evaluating meeting room interoperability, organizations should ask the following questions.

Platform coverage

You never know who you will meet tomorrow.

- Can the room join the meeting platform used by the customer, partner, agency, supplier, or guest?
- Is the solution limited to one meeting platform?
- How are new platforms and meeting features supported over time?

Room compatibility

- Which SIP-capable devices are supported?
- Can the solution work across multiple device vendors?
- Does it support both current and older room systems?

User experience

- Can users join meetings with ease, whether the meeting is scheduled, ad-hoc, or accessed from a mobile-assisted workflow?
- Does the experience remain consistent across meeting platforms?
- Do users get the native in-meeting experience and layout from the meeting platform on the SIP device?

Meeting capabilities

- Does it support content sharing?
- Does it support captions, reactions, layouts, raise hand, participant controls, or chat?
- Does feature support vary by meeting platform?

Deployment and security

- Is the solution cloud, hybrid, on-premises, or all three?
- Where does media flow?
- What data is processed and stored?
- How does the solution support high-compliance environments?
- Can it support government or restricted cloud scenarios?

Operations

- How is the solution licensed?
- How quickly can it be deployed?
- How are video devices and rooms managed?
- What reporting or monitoring is available?
- How does it scale across regions and room estates?

A strong interoperability strategy should answer these questions clearly. If it cannot, the organization may be solving today's meeting problem by creating tomorrow's room problem.

11. Conclusion: The room should not care which platform the meeting is on

The future of collaboration is not single-platform.

Organizations will continue to use different meeting services internally and externally. People will continue to send invitations from the platforms they prefer or are required to use.

The meeting room must adapt to that reality.

A platform-independent meeting room strategy allows organizations to keep the video systems that still work, preserve familiar user workflows, support modern meeting experiences, and avoid unnecessary platform lock-in.

Synergy SKY CONNECT helps make that possible by bridging existing SIP-capable rooms into modern web meetings across platforms.

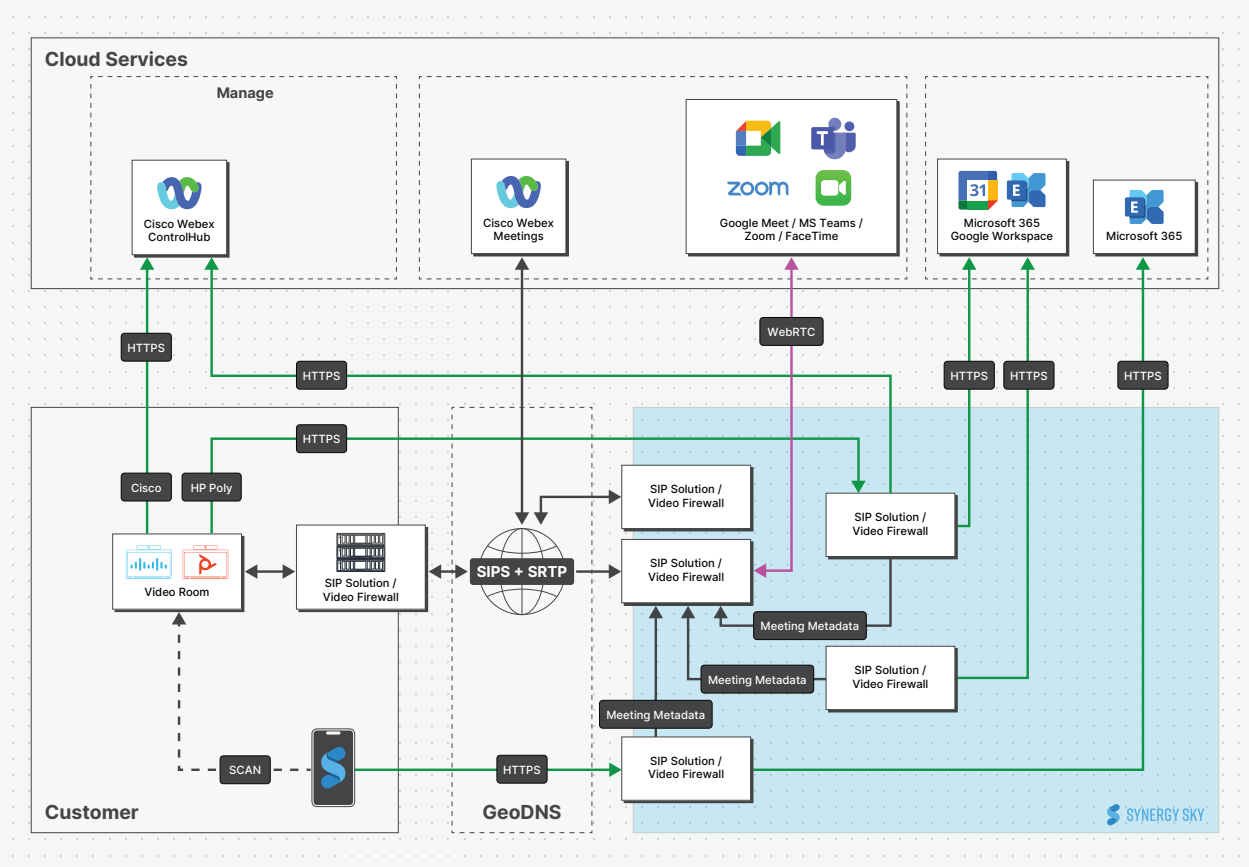
The goal is not to make users think about interoperability.

The goal is to make the room join the meeting.

Appendix A

Architectural Deep Dive & Protocol & Signaling Translation

Synergy SKY CONNECT rejects the limitations of proprietary APIs and hardware-dependent translation. Instead, it utilizes a patented architecture (US Patent #11606535) built upon Open Video Interoperability (OVI) - a framework combining legacy telecom standards (SIP) with modern web standards (W3C/WebRTC).



A. Ingress & Containerized Initialization

Intelligent Routing:

When an endpoint dials a CONNECT SIP-URI (manually or via a calendar click), GeoDNS routes the request to the nearest regional Management Node. A local SIP Proxy intercepts the signaling and retrieves the tenant metadata.

Server-Side Compute Isolation:

The Load Balancer determines capacity and passes the call to a dedicated Media Node (running bare-metal Linux). Instead of utilizing the endpoint's weak onboard processing, a server-side Gateway Launcher instantly spins up an isolated, stateless Gateway Container (Chromium-based) specifically for that individual call.

B. Media Handling & Platform Emulation

Official Web Client Execution:

Inside this server-side Chromium container, CONNECT launches the official, native web client of the target platform (using the Zoom Meeting SDK, or web-access frameworks for Teams, Google Meet, and Apple FaceTime).

Protocol Normalization:

The container acts as the ultimate translator. To the cloud meeting provider, the container looks exactly like a standard web participant. To the room system, the container behaves like a standard, secure SIPS/SRTP video endpoint delivering up to 1080p video at 30fps.

C. Interactive Control via TrueView Engage

DTMF Command Mapping:

Because the meeting runs inside an official web client container, CONNECT inherits the platform's latest features automatically. To allow the physical room to control these features, CONNECT maps touch-panel interactions (Mute, Layouts, Chat Pane, Raise Hand, Emojis) into standard SIP DTMF tones.

Mobile control option:

Users can also access TrueView Engage from a mobile phone. When a call connects, a QR code appears on the room scre en for the first few moments. The user can scan the QR code to open the meeting controls on their phone. If the QR code has disappeared, the user can press numeric button 7 on the control panel to display it again.

The Feedback Loop:

When a user presses a button on their Cisco or custom AV touch panel, the tone is captured by the gateway proxy and injected directly into the Chromium container, driving the native web interface in real-time.

Appendix B

Enterprise Governance: Total Data Isolation & High-Compliance Routing

For enterprise security architects and federal agencies, traditional interoperability tools introduce severe data leakage and tenant restrictions. CONNECT addresses these compliance hurdles at the architectural level:

Elimination of Third-Party Tenant Dependencies: Unlike alternative solutions that require a dedicated Azure component per tenant or complex cross-organization federations, CONNECT requires no modification to external tenant policies. A high-compliance room can seamlessly join an external, third-party meeting invite anonymously and securely.

Cross-cloud interoperability for federal environments: Traditional Cloud Video Interop (CVI) architectures strictly trap rooms within their own cloud level; an endpoint registered to a commercial tenant cannot natively jump the gap to a secure government environment (like GCC-High or GCC-DoD). Because CONNECT routes out-of-band via containerized web interfaces, CONNECT for Government bridges these environments seamlessly, providing cross-tenant and cross-cloud compatibility for military and defense contractors.

Air-Gapped Media Protection: In on-premises or hybrid deployments, the Media Nodes handle the heavy lifting behind the organization's firewall. Meeting metadata remains encrypted via HTTPS outbound hooks to Microsoft 365 or Google Workspace, while actual audio, video, and content sharing streams are isolated, keeping internal networks pristine and completely decoupled from public WebRTC spaces.