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JOINING VIDEO MEETINGS THROUGH VIDEO ENDPOINT WITH USB
CONNECTION

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ABSTRACT

A challenge with current video conferencing platforms and services is that not all such entities provide a standard method for connectivity. To address such challenges, techniques are presented herein that enhance a video conference experience. In particular, aspects of the presented techniques leverage proven technology to substantially simplify the process of using a Universal Serial Bus (USB)-enabled video room system with any meeting software with which a user might attempt to connect. Further, aspects of the presented techniques support the addition of calendaring and automation to a video room system to greatly simplify the process and ensure that the user experience is as simple and as straight forward as possible. For example, when a user walks into a conference room with a video room system that is enabled according to aspects of the techniques presented herein, he or she will see a schedule on the video room system's calendar display, they may connect their computer or laptop to the video room system through a (e.g., USB-C) cable, and the video room system will send commands to the computer causing it to automatically start a meeting.

DETAILED DESCRIPTION

A challenge with current video conferencing platforms and services is that not all such entities provide a standard method for connectivity such as, for example, standardized video conferencing protocols like the Session Initiation Protocol (SIP) or the International Telegraph Union (ITU) Telecommunication Standardization Sector (ITU-T) Recommendation H.323. As a result, many video conference vendor device offerings cannot connect to or interact with meetings hosted on non-compatible collaboration platforms. Currently, some video conference endpoints include USB-based cables that

allow an endpoint to become a web camera in a computer-based video conference that runs as an application on the computer. A downfall to such an approach is that users lack the ability to employ many of the benefits of a video room system, particularly the ability to schedule that video room system as its own entity and use its control interface to start a meeting.

To address the types of challenges that were described above, techniques are presented herein that enhance a video conference experience. In particular, aspects of the presented techniques leverage proven technology to substantially simplify the process of using a USB-enabled video room system with any meeting software with which a user might attempt to connect. Further, aspects of the presented techniques support the addition of calendaring and automation to a video room system to greatly simplify the process and ensure that the user experience is as simple and as straight forward as possible.

Figure 1, below, depicts elements of how aspects of the techniques presented herein may work within the context of an illustrative example.
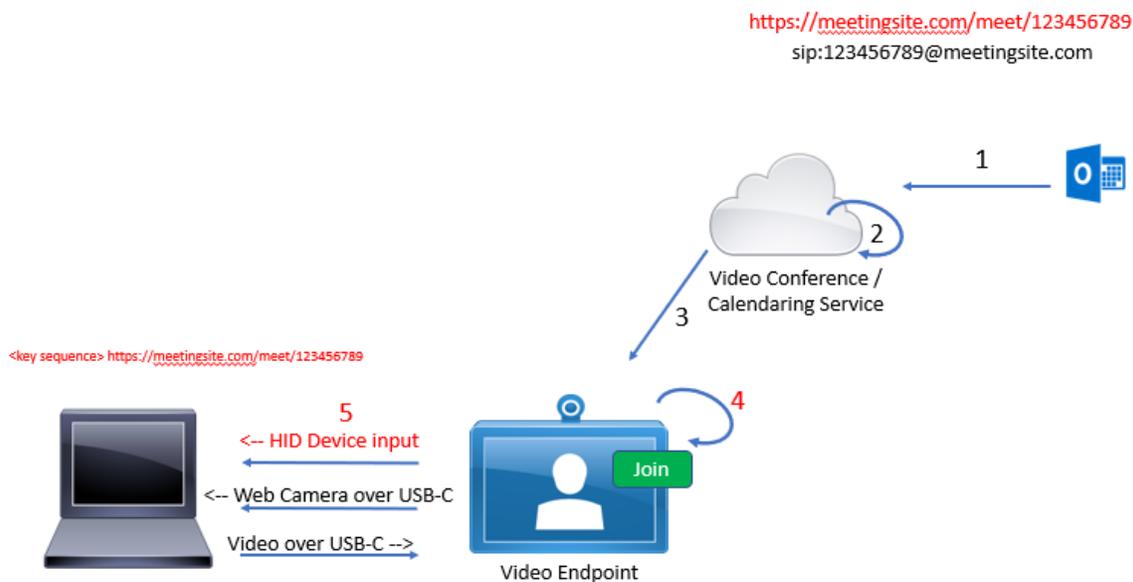

Figure 1: Illustrative Example

The illustrative example, as depicted in Figure 1, above, comprises five steps which serve to help explicate aspects of the techniques presented herein. Those steps will be described in the following narrative.

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During a first step, an invitation for a meeting platform is sent to, or forwarded to, a room resource for a video room system through a hybrid calendar service-compatible email system (such as, for example, Microsoft Exchange).

During a second step, the calendaring service parses the body of the invitation for a Uniform Resource Locator (URL) that identifies if the video conferencing service is supported.

During a third step, the URL for the meeting on the video conferencing service is forwarded to the video room system, populating the calendared meeting details in a way that is typical of a calendared meeting on a current video room system.

During a fourth step, the video room system detects the type of a meeting. If a typical SIP Uniform Resource Identifier (URI) is present then a 'join' meeting button is displayed, as is standard today. If a URL is detected and a Web Real-Time Communication (WebRTC) capability for that meeting technology is supported then the 'join' button will start this type of meeting. If the first two options are not supported, then the 'join' button will still appear but it will show simple instructions for the user to connect his or her computer with a provided (e.g., USB-C) cable to the video room system. The video room system will also verify the connection to the computer, laptop, etc. to ensure that the end user connected correctly.

During a fifth step, when the video room system is connected to a computer it becomes a web camera and an additional display for that computer. The video room system also becomes a human interface device (HID) that can send key stroke commands to the connected laptop or personal computer (PC). A keyboard character sequence may be used to send the meeting URL to the computer and launch the meeting when the 'join' process on the video room system is confirmed.

Aspects of the techniques presented herein, as described and illustrated in the narrative that was presented above, offer a number of benefits. Several of those benefits will be described below.

Under a first benefit, all of the meetings in a room will be scheduled in the same way. For example, an invitation may be dispatched to the video room system (in, for example, a personal information manager solution) and the meeting may be forwarded to the video room system's resource calendar.

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Under a second benefit, aspects of the techniques presented herein offer an agnostic video meeting solution as the computer is what is launching a meeting through a meeting services application or a web browser client.

Under a third benefit, there are no software client dependencies on the laptop or computer that is connected to the video room system, thus ensuring that a user receives the best experience when she joins a meeting. A user only needs to have (on the laptop or computer) the meeting software that they already employ.

In summary, techniques have been presented that enhance a video conference experience. In particular, aspects of the presented techniques leverage proven technology to substantially simplify the process of using a USB-enabled video room system with any meeting software with which a user might attempt to connect. Further, aspects of the presented techniques support the addition of calendaring and automation to a video room system to greatly simplify the process and ensure that the user experience is as simple and as straight forward as possible. For example, when a user walks into a conference room with a video room system that is enabled according to aspects of the techniques presented herein, he or she will see a schedule on the video room system's calendar display, they may connect their computer or laptop to the video room system through a (e.g., USB-C) cable, and the video room system will send commands to the computer causing it to automatically start a meeting.