



Leader in Digital Collaboration

Use of Audio and Web conferencing continues to grow

Due to reduction in travel budgets, organizations are increasingly conducting meetings using audio conferencing services. In order to make them more productive, such meetings are frequently accompanied by web conferencing. The current practice in the industry is to outsource both of these services to phone companies or specialized service providers. As a typical conference call involves multiple parties and usually lasts for 30 minutes or more, the conferencing charges add up quickly. Besides the expense, the end users find it inconvenient to establish and track two separate services, typically from two different service providers. Furthermore, the current web conference services also requires the end user to learn new set of controls to manage the documents during a web conference session.

What Users Want

What organizations need is a cost effective, audio and web conferencing solution that is integrated and easy to use. The web conferencing session should not require the users to learn a new set of controls. The service should be accessible to the users from where ever they are, without requiring human intervention for setting up the conference sessions.

The XOP Approach

XOP Networks has developed a set of audio and web conferencing capable Digital Collaboration Bridges that address the needs of demanding conferencing users. These appliances integrate with an organization's existing telephone and data network infrastructure, bringing advanced audio and web conferencing capabilities in-house. No change is required to the existing network infrastructure or the firewall. Being an in-house resource the organization only has to pay long distance charges for people accessing the bridge remotely. For local users and internal employees the audio conferencing and web conferencing services are available 24x7 for no additional charge.

The XOP DCB Products

The XOP Networks products are marketed under the Digital Collaboration Bridge brand name. The DCBs scale from 8 ports to 480 ports in one chassis. The DCBs can support station side analog or T1/E1 loop start lines or digital T1/E1 E&M or ISDN PRI trunks. The DCBs are based on Linux OS and support built-in web server and an e-mail server.

The embedded web server provides an intuitive and user-friendly web interface for conference scheduling and management. End users can schedule their own voice and web conferencing sessions using a standard

browser. The system administrator can perform product configuration and routine management functions over the Internet as well.

The built-in e-mail server is used for sending notifications containing the details of scheduled conferences and for end of conference summary reports.

The DCB servers can be used to set up conference calls between VoTDM end points only, VoIP end points only, or a combination of the two. The products comply with all applicable networking and telephony standards to permit straightforward and fast deployment. Installation time, including configuration, typically takes less than one hour.

The DCB servers have proven interoperability with a number of industry's leading PBXs, Soft-switch/Media gateways and End Office switches.

myXOP Web Portal: The DCB web-based user interface has been designed with ease of use and simplicity in mind, eliminating the need to invest in training of the end users. It complies with industry standard browsers and requires no downloads, plug-ins or additional software installation. The interface provides separate web pages for moderators and the system administrator. With a few clicks, a moderator can schedule his/her audio and web conferencing session. The same interface is used for enabling features such as recurring calls, digital recording, document sharing and desktop sharing. The myXOP user interface is secured using https protocol for preventing unauthorized access to the system.

The DCBs provide a variety of audio conferencing services.

Reservation-less Conferencing: These conference calls are used on ad-hoc basis. The DCB supports two types of reservation-less conference calls:

PIN based: The DCB provides permanently assigned PINs. The moderator and participants can dial in to the bridge at a designated time and use these PINs to join a conference.

DNIS based: When using ISDN PRI or CAS T1/E1 with DNIS capability, the DCB can place participants into different conference rooms based on the incoming DNIS number.

Reservation-based Conferencing: These calls are scheduled ahead of time. A given number of ports are reserved exclusively for the duration of such calls. To enhance the security, the moderator and the participants are provided with unique PINs that are valid only for the duration of the call. A five-minute 'lobby time' is also provided. The calls can be scheduled by logging into the myXOP web portal or via Microsoft Outlook.

Outlook Integration: A moderator can schedule a meet-me conference by using the Calendar function of Microsoft Outlook. After successfully scheduling, the system sends an invitation email message to the Moderator and the participants. The email contains

necessary dial in number and PINs required for entering a conference. The email also carries a calendar (.ICS) attachment that can be used by the recipients to post the invitation on one's Outlook Calendar.

Presentation Mode Conferencing: These calls are used for applications such as Analyst meetings, Training, and Webinars etc. After a one-way broadcast session is over the moderator can enable the two-way Question and Answer session. Participants dial into the bridge at the designated time to make use of this service.

Dial-out Conferencing with Find-me: On-demand, the system can simultaneously dial out to members of a given group and try to reach them at their multiple phone numbers. Upon pickup and acceptance, it automatically adds the individual to the conference. Such calls can be triggered by the system, simply by receiving an incoming DNIS when available or via the Moderator calling and entering a special service access code.

Reminder Messages with Acknowledgement: A moderator can record a voice message on the fly or ahead of time and send it to all participants. This capability can be used for sending reminders to participants about an upcoming conference call. In addition to voice messages, the system can also send SMS, Pager and Email based alerts. Further, while playing the message the system can collect DTMF digits that can be used to acknowledge if a participant will attend the conference call or not.

Integrated Desktop sharing: This capability allows a moderator to share his/her desktop with other participants. Any application (Word, Powerpoint, Excel etc.) that is running on a moderator's PC is made visible to other participants. The moderator is in control of his/her documents at all times as the documents are not required to be uploaded to the server. This capability also allows the moderator and the participant to 'co-browse' the Internet. Desktop sharing can be used either standalone or in conjunction with a scheduled audio conference.

Flexible participation: For any of the scheduled calls, the participants can be selected from a) moderator's own frequently called group, b) his/her own participant list, c) from an enterprise wide address book or d) can be created on 'ad-hoc' basis. A moderator can create frequently used groups quickly by uploading CSV files.

Real Time Web Controls: A moderator can log into the 'Moderator Area' of myXOP Web Portal and see a real time view of his/her ongoing conference. The moderator can see the names of the participants based on a) the PIN entered, b) the incoming ANI (caller ID) and c) the destination number in case of a dial-out participant. The moderator can also exercise in-conference controls via the 'Real View' web page. A system administrator can log into the Admin area of myXOP Web Portal and get a real time view of the entire collaboration bridge.

In-conference Controls: To further enhance the end user experience, the following in-conference controls are available to the moderator and participants. These controls can be exercised via web controls or by pressing digits on a telephone keypad.

Operator Assistance: A moderator can invite an operator into the conference who can then help monitor/operate the rest of the conference.

Dial-out and Add: After a conference session has started, the moderator can step outside of the conference, dial-out and invite other participants and add them to the ongoing conference.

Start/ Stop recording on the fly: A moderator can record only relevant parts of a given conference. The recordings are made using .wav format. A link to the recorded file is posted in moderator's account. The moderator can simply play the recording on his/her media player or save it on his/her PC's hard-drive for future reference.

Mute All/ Unmute ALL: A moderator can mute all participants and put the conference in broadcast only mode if necessary.

Lock/Unlock: A moderator can lock or unlock a conference.

Mute/Unmute: A moderator or a participant can mute and unmute him/her self. A moderator can also mute/unmute a participant.

Volume Control: A moderator or a participant can increase or decrease the volume of the incoming signal via DTMF keys on their handset.

Disconnect a participant: The moderator can disconnect a participant from an ongoing conference.

Drop the conference: A moderator can stop an ongoing conference.

Vanity PINs: The DCB allows a moderator to pick a PIN of his/her own choosing. The moderator can reset the PIN at anytime without administrator's assistance. This capability becomes important in case a moderator's PIN gets compromised.

End of conference summary: After a given conference call is over, the system automatically creates an end of conference summary report and emails it to the moderator. It contains details such as number of participants, total number of minutes used etc. This capability also serves as a security measure in case a moderator's PIN is compromised.

Usage Measurement and Billing: Extensive Call Detail Records are captured by the DCBs. This information can be used generate invoices. A billing package can be added to the base system software that will allow an operator to commercially sell conferencing service.

Multiple Logins: More than one moderator can log into the moderator's account on the myXOP web portal and exercise various features. This capability can be

used, for example, by a secretary to set up conferences on behalf of his/her supervisor.

Custom announcements: A system administrator can customize any of the system's announcements by dialing into the bridge and re-recording via an ordinary telephone.

Back up and restore: A system administrator can create back ups of the critical files and the Database either on demand or on a scheduled basis. The system administrator can restore the system to factory default state if needed.

Security Features: Following features are provided to keep DCBs secure.

Built-in Firewall: Using the built in firewall, the system administrator can restrict remote access to the system only from designated IP addresses. Only ports necessary for the operation of the product are open to the external network.

Secure Login: Usernames and Password and other important web pages are accessible only through HTTPS port.

OS Patches: Installation of security patches and updates to the operating system are provided as part of periodic equipment maintenance.

Intrusion Detection: The DCBs provide intrusion detection and monitoring. A report is sent to the administrator in case a change is detected to any of the 'protected' areas.

Voice Quality: The DCBs use state-of-the-art hardware with extensive Digital Signal Processing based algorithms that result in crystal clear audio quality. Notable items are:

Echo Cancellation (16 ms): Removes distortion due to impedance mismatch.

Tone Clamping: Allows use of in-conference controls without disturbing the ongoing conference.

Automatic Gain Control: Normalizes power level of incoming audio signals coming from far out locations.

Conferencing Algorithm: Automatic selection of loudest speaker algorithm or raw summation based on number of participants.

Cascade conferencing: Create larger conferences by bridging two or more smaller conferences that may be on different spans.

System Management: The System Administrator can view the status of the T1/E1 spans, and monitor CPU and Hard Disk utilization via the myXOP web portal.

xw DCB Servers:

Port Configurations:

Servers with analog interface: DCB-8 and DCB-16

Servers with digital interface: DCB-24, 30, 48, 60, 96, 120, 144, 192, 240, 480

Desktop sharing: 30 - 90 simultaneous sessions per server

Voice Transport:

T1/ISDN PRI: D4/AMI, ESF/B8ZS, RJ-48c
E1/ISDN PRI: G.703, G.704, HDB3, RJ-48c
100baseT Ethernet

Station side interfaces:

Analog lines: Loop Start, FXO, RJ-25

T1/E1: Loop Start, Ground Start

Trunk Side interfaces:

T1/E1: E&M with Wink Start, Immediate Start
T1/E1: ISDN PRI with NFAS, NI-2, #4ESS, #5ESS, DMS100, DMS250, NET5, QSIG

VoIP: G.729a, G.723 and G.711 compression, SIP and H.323 based signaling

Data transport:

100baseT Ethernet

Form Factor:

2U and 4U standard 19" rack mountable industrial grade chassis

SATA RAID Mirrored Disks

Optional 110 V and -48 V redundant power supplies

Warranty: One Year

Please visit our web site for additional product literature

www.xopnetworks.com