



White Paper - July 2010

## Desktop Video Conferencing

---

Industry trends and deployment best practices

---

## Abstract

Desktop video conferencing can be defined as the use of video conferencing software on a personal computer, or more generally without the need of additional dedicated equipment. It contrasts with "room video conferencing" where participants have to move to a dedicated conference room equipped for video conference.

In the last few years, desktop video conferencing emerged as part of daily processes and communication routines within companies and organizations of any size and industry, all over the world, complementing (and in some cases replacing) traditional room systems.

Gartner says that more than 200 million workers worldwide will run corporate-supplied video conferencing from their desktops by 2015, compared to 7 million in 2008. Spending on corporate-sanctioned video conferencing to the desktop will grow from 13.9% of IT budgets, to account for one-third of corporate spending on video conferencing<sup>1</sup>.

This whitepaper analyzes the latest trends in desktop video conferencing, highlighting the best practices for its deployment. The primary focus will be on Enterprises bearing anyway in mind that all the features/benefits described can be adapted to any specific need of other scenarios such as Education and Telehealth environments.

## Scenario and Benefits

Even if the need to reduce cost and increase productivity strengthened by the economic downturn pushed companies towards more affordable video communication solutions, the growth of desktop video conference has been mainly driven by other factors. On one side, the transformation of workspaces due to the rise of mobile and remote workers combined with the comfort of having a video conference software directly on your laptop, and on the other side the dramatic improvements in video and audio quality that enable an amazing experience quality.

Though enrichment of user experience impacted other video communication solutions, such as telepresence, desktop video conferencing provides unique benefits in terms of:

- ➔ Flexibility
- ➔ Cost effectiveness
- ➔ Scalability and manageability

Desktop video enables people to meet on the fly, collaborate when they need, fasten decision making and increase business agility without need to schedule resources or require IT support, while centralized management and deployment allow IT Managers to maintain control over their infrastructure.

---

<sup>1</sup>Source:

<http://www.computerweekly.com/Articles/2010/01/14/239960/Companies-to-spend-20-more-on-telephony-says-Gartner.htm>

## Driving a successful deployment

As desktop video conferencing offers grows, it becomes essential to focus on what makes it an high-value choice and key asset for the company. This chapter describes some important elements that need to be taken into account when planning a desktop video conferencing service.

### Making the most out of existing infrastructure

New generation solutions should be designed to integrate with existing infrastructure, which means they should *interoperate* with any standard based device (H.323 or SIP), be available for *multiple platforms* (PC or Mac OS X) and being able to integrate with existing *company directories* (eg: LDAP).

### Solve Network Related Issues

The need of connecting with mobile workers, customers and partners that are outside company network makes essential the ability to solve *Firewall/NAT traversal* issues.

Another key factor, with the increased number of people given the opportunity to use Full-HD video conferencing inside the organization, is *bandwidth shaping*, supported by the ability to automatically adapt to changing network condition.

### Manage and Scale

Depending on company structure and number of users, different needs arise in terms of manageability.

Key aspects include *centralized management*, a *suitable licensing model*, *tracking* and *reporting*.

### End user adoption

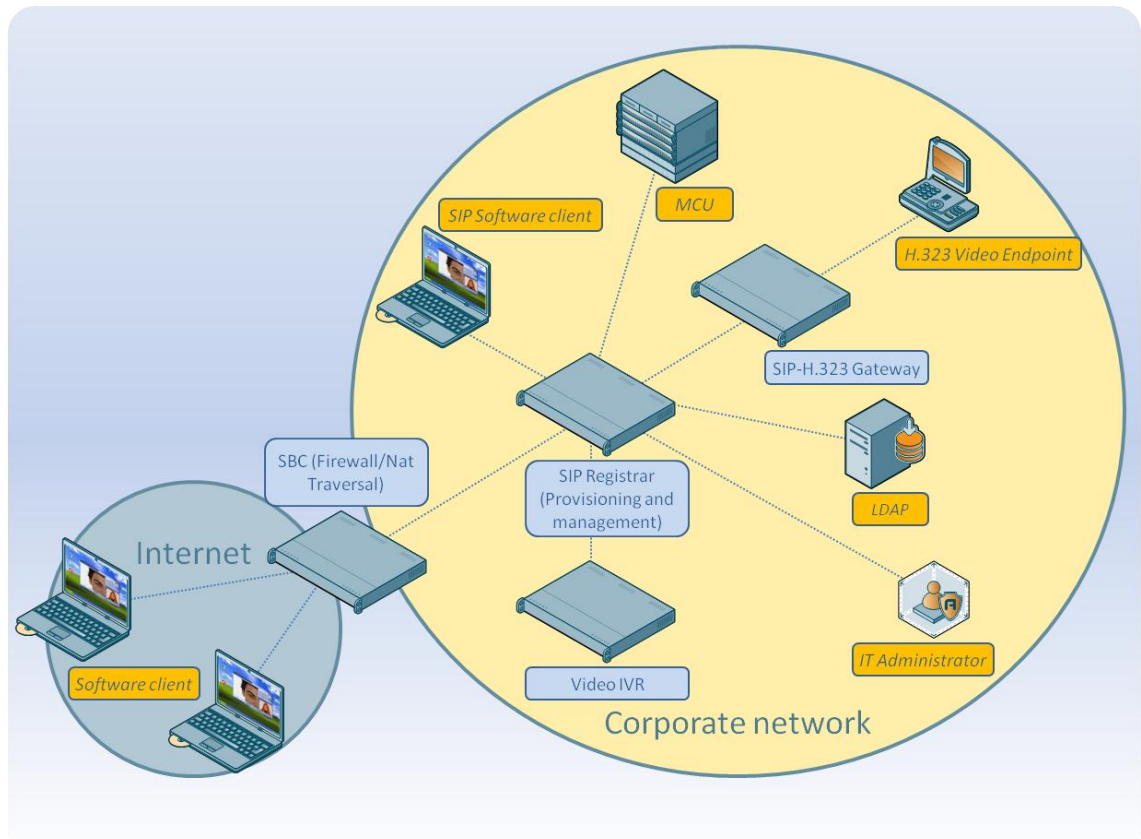
What employees want is to collaborate with their colleagues whenever they need to. On the other hand many of them might be skeptical about video conferencing thinking of it as it was

years ago: working one time out of three, requiring IT support and providing rough audio and video quality.

In order to increase employee adoption and justify the investment in a new solution, IT managers should offer their colleagues an *easy to use* software solution with *collaboration*, *multi-party conferencing* and *session recording* features.

## Architecture description

This paragraph describes the essential building-blocks for the proposed architecture.



### Centralized provisioning and management

This is the core of the architecture. Here IT Administrators are able to centrally manage all aspects of the solution.

### Firewall/NAT Traversal solution

Provides seamless connectivity amongst users inside and outside of company LAN.

### SIP-H.323 Gateway

Most of the deployed rooms systems worldwide are based on the older H.323 protocol, while the newer SIP protocol is gaining momentum. It is fundamental being able to communicate with both protocols.

### MCU (Multipoint Control Unit)

An MCU is needed to connect three or more participants in the same conference.

### Video IVR

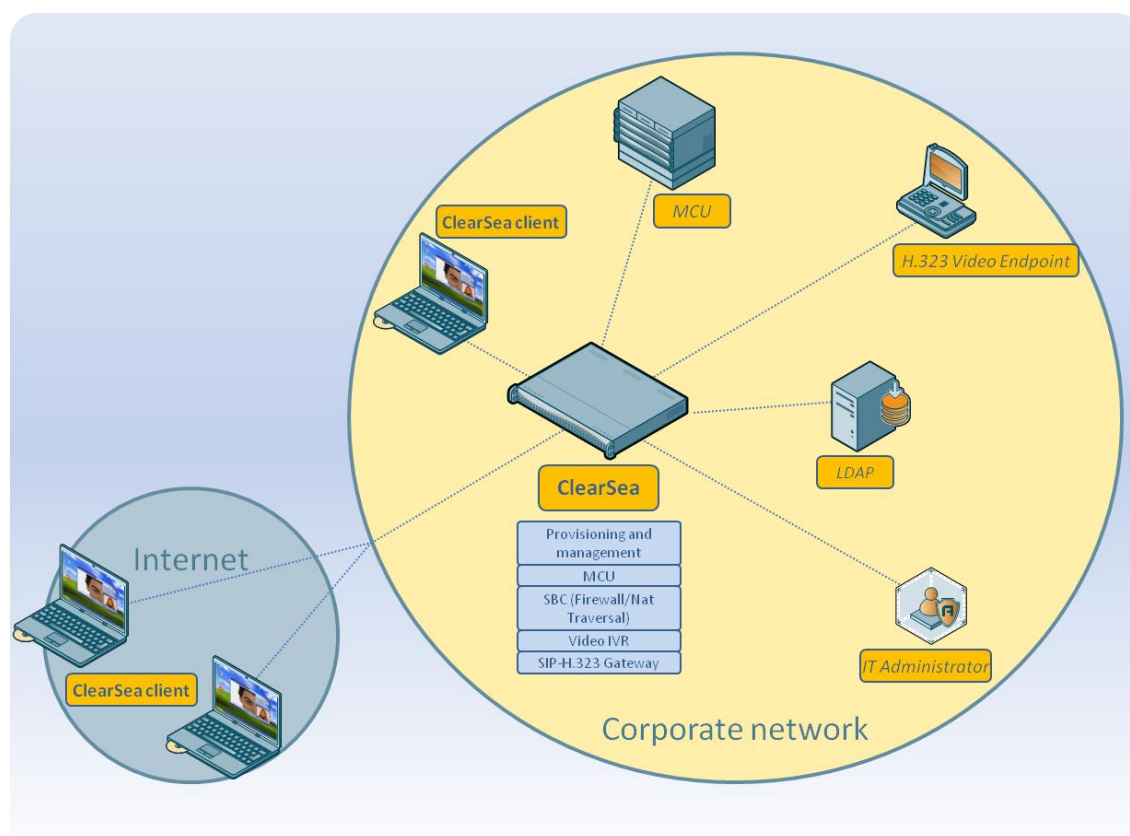
A video IVR unit greatly simplifies the user experience, as acting as a centralized guided directory can help connecting to other users by means of simple numeric extensions.

### Software client

Installed on PCs, MACs and mobile devices provides a consistent video communication experience across different devices.

## Implementation

In this final chapter we describe how the proposed architecture can be easily implemented with Mirial ClearSea.



### Mirial ClearSea

Mirial ClearSea, built by Mirial on over 10 years of desktop video conferencing excellence, embeds in a single box all elements described above.

Based on a client/server architecture, ClearSea includes both a state-of-the-art PC and Mac HD software client, and a server component providing centralized provisioning and management, available as physical appliance or as a Virtual Appliance (VMware based).

Thanks to ClearSea, desktop users inside or outside the company LAN can easily place video calls to each other or to any standards-based H.323 or SIP room system or equipment,

without the need of any additional gateway or custom configurations. The same goes for any standard equipment, that is able to connect to any desktop user directly or with the help of the ClearSea embedded video IVR.

Besides supporting natively both SIP and H.323 protocols, ClearSea acts as an IP gateway and thus is able to solve firewall/NAT traversal issues for any device.

ClearSea provides multiconferencing capabilities, and is able to leverage on the internal centralized directory or to connect to an external LDAP directory.

## Glossary

**H.323:** an International Telecommunications Union (ITU) standard that provides specification for audio/video communication over packet based networks.

**LDAP (Lightweight Directory Access Protocol):** an application protocol used to access a directory listing. A directory is a set of objects with attributes organized in a logical and hierarchical manner.

**MCU (Multipoint Control Unit):** a device used to moderate a video conference of three or more end points.

**SIP (Session Initiation Protocol):** signaling protocol used for establishing sessions in an IP network.

**Video IVR (Interactive Voice Response):** an interactive voice response system that includes video.

**Virtual Appliance:** a virtual machine image that includes the operating system and the application designed to run on a virtualization platform.

## Need more information?

You can find more information about Mirial products and other whitepapers on [www.mirial.com](http://www.mirial.com)



[www.mirial.com](http://www.mirial.com)

Copyright (c) 2010 Mirial s.u.r.l. - All rights reserved.

No part of this work may be reproduced, stored in a retrieval system, adopted or transmitted in any form or by any means, electronic, mechanical, photographic, graphic, optic recording or otherwise, translated in any language or computer language, without the prior written permission of Mirial. Due care has been taken to make this Document as accurate as possible. However, Mirial makes no representation or warranties with respect to the contents hereof and shall not be responsible for any loss or damage caused to the user by the direct or indirect use of this Document. Furthermore, Mirial reserves the right to alter, modify or otherwise change in any manner the content hereof, without obligation of Mirial to notify any person of such revision or changes. All company and product names are trademarks of the respective companies with which they are associated.