Legal Profession - Audio Conference System + Recording

Operational Overview

The Miton CallXChange System is a seamless, easy to use Audio Conferencing Solution providing a secure environment for all participants. The CallXChange System is a centralized service platform where Legal Professionals, administrators, managers and participants access services tailored specifically for the Legal Profession. Integrated digital recording, conference reporting and seamless access to transcription services provide additional tools which improve overall organisational effectiveness.

The aim of the system is to provide Legal Professionals with a secure telecommunications environment which they operate from their PC, whereby they can conduct telephone conversations with multiple participants under their control. Using the browser-based Conference Control Interface, many aspects of the conversation are logged to a database, such as; names of participants, time called, audio recording which includes a text bookmark option and automatic logging of when participants join and leave a conference.

The solution includes three main areas:

1. Administration screens
2. Conference Control Interface
3. Conference Audio Recording Review Interface
4. On-line Document Sharing Interface

Users can either purchase a self-contained piece of equipment that is installed at their offices, or users can purchase a service agreement whereby space is allocated on Miton's server located in Docklands London.

The Miton CallXChange System is a tele-conferencing system that enables and manages tele-conferences and delivers clear, natural audio.

The Miton CallXChange System is completely digital and uses advanced audio processing technology software on every port for true, full-duplex conferences with superior audio quality. Conferences users can access Miton CallXChange System through the World Wide Web or through DTMF tones on their telephone. The Miton CallXChange System can be configured to your organizational requirements through easy to use web interface software.

Interfaces can be customised to either fit the branding of the user, or features can be added that enhance the business process of the user.

The Miton Conference Bridge CallXChange provides a centralized, custom conference bridge environment with additional services & functions like...

- Facilitating Multiple participants in telephone conference bridge
- Providing web browser interfaces to the conference bridge for users
- Conferencing software to Digitally record hearings automatically or on-demand
- Conference bridge conferencing software provides search, retrieval, playback & copy functions of conference recordings
- Providing secure long-term recording archival and portable archive media
- Conference bridge Administrator conferencing software provides detailed multi-level reporting for billing, utilization and attendance
- Ad-hoc text messaging between participants
- Miton Conference Bridge tailored specifically for the Legal process.
- Miton can also provide custom conferencing software integration to most industry database applications and transcription services.

Conference Control Interface

The Conference Control Interface is designed to be used Legal Professionals who want to have full control over their conference calls. The interface is based on a system in use in the USA by a number of large government

organizations with over 205 lawyers. The system was designed to replace a manual system where tape recorders were used to tape the calls.

The system has been in use by lawyers and review attorneys for over twelve months now and has dramatically improved the efficiency with which they operate. Significant cost savings have therefore been achieved.

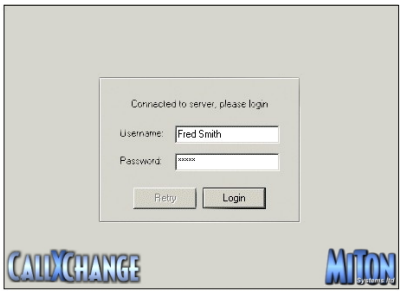


Figure 1: Secure Login

The Conference Control is accessed via a secure log-in procedure using Microsoft Internet Explorer Web Browser Tool. This means that access is simple and no custom software is required on the users PC.

The control is designed to enable persons with minimal training to dial participants and have full control over the conference, with the ability to mute/un-mute participants as well as dial and disconnect them.

The picture below shows a typical conference control in use.

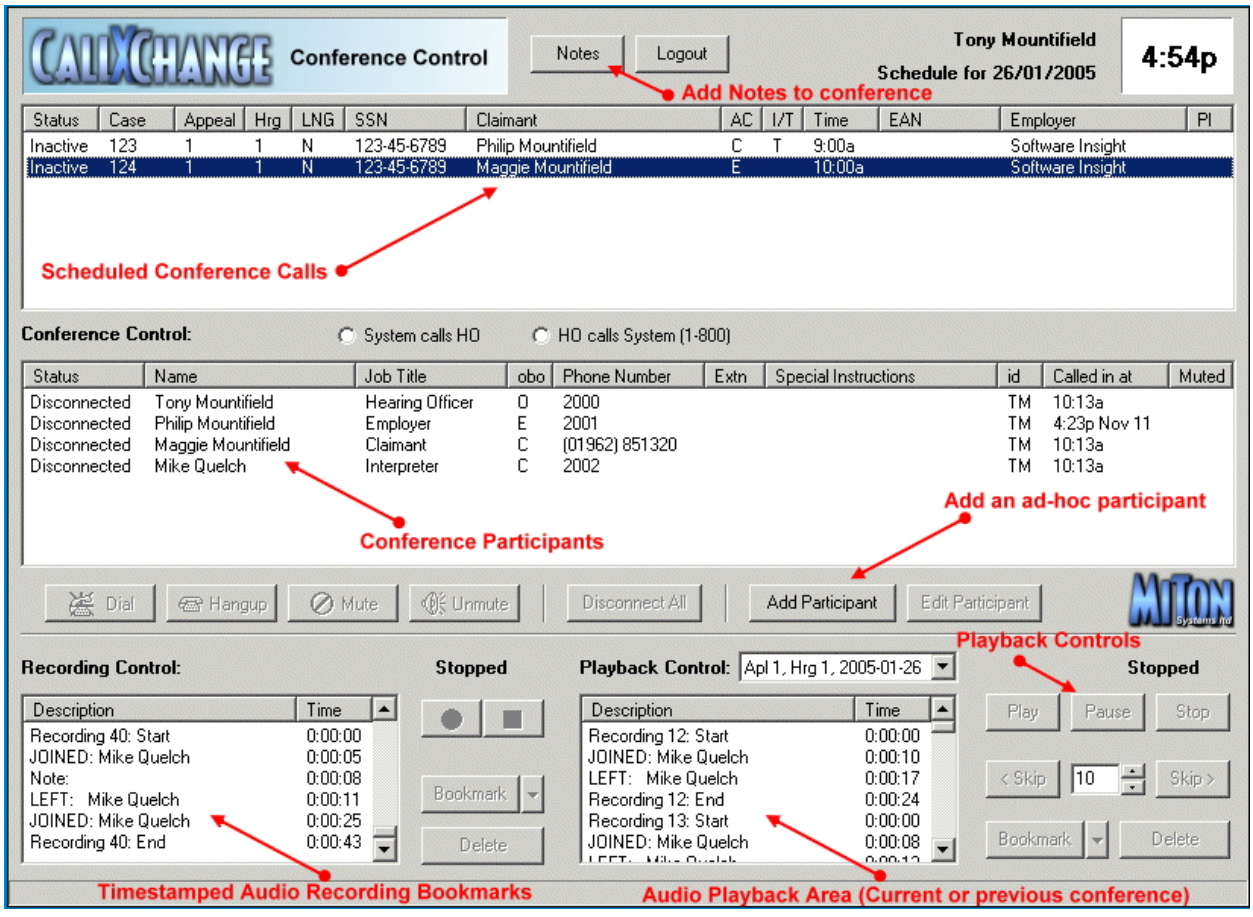


Figure 2: Conference Control

There are four main areas of the Control Screen:

1. The scheduled conferences for today

   This area lists all the pre-booked conferences for today

2. The Conference Participants Control Area

   This area enables participants to be dialed from the Conference Control

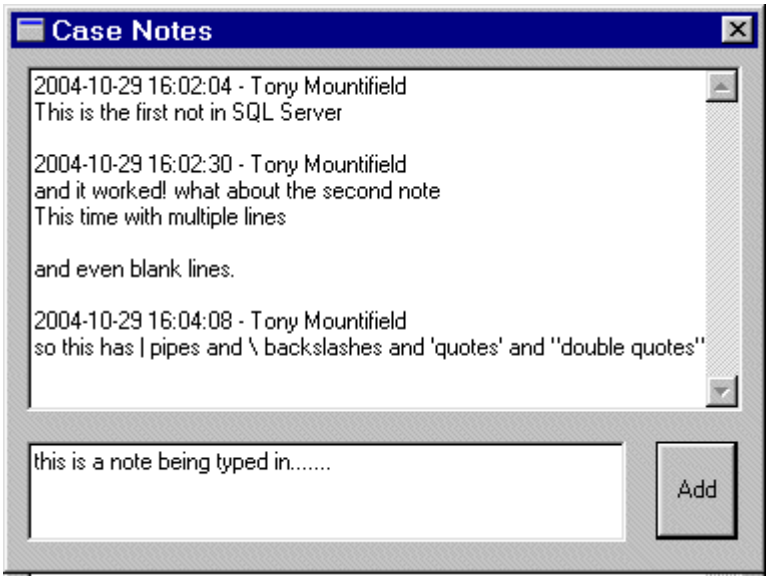
3. Recording Control

   This area enables informative text bookmarks to be entered. It also lists the bookmarks that are automatically entered by the systems, for example with a participant is disconnected.

4. Playback Control

   This control enables the current recording, or for previous recordings to be played back into the conference.

There is also the facility to add notes to a conference – see picture below



Conference Audio Review Interface

This interface enables previously recorded conferences with associated bookmarks to be reviewed. There is a search facility to enable the recording to be found, plus the ability to request a hard copy of the audio in MPG3 format.

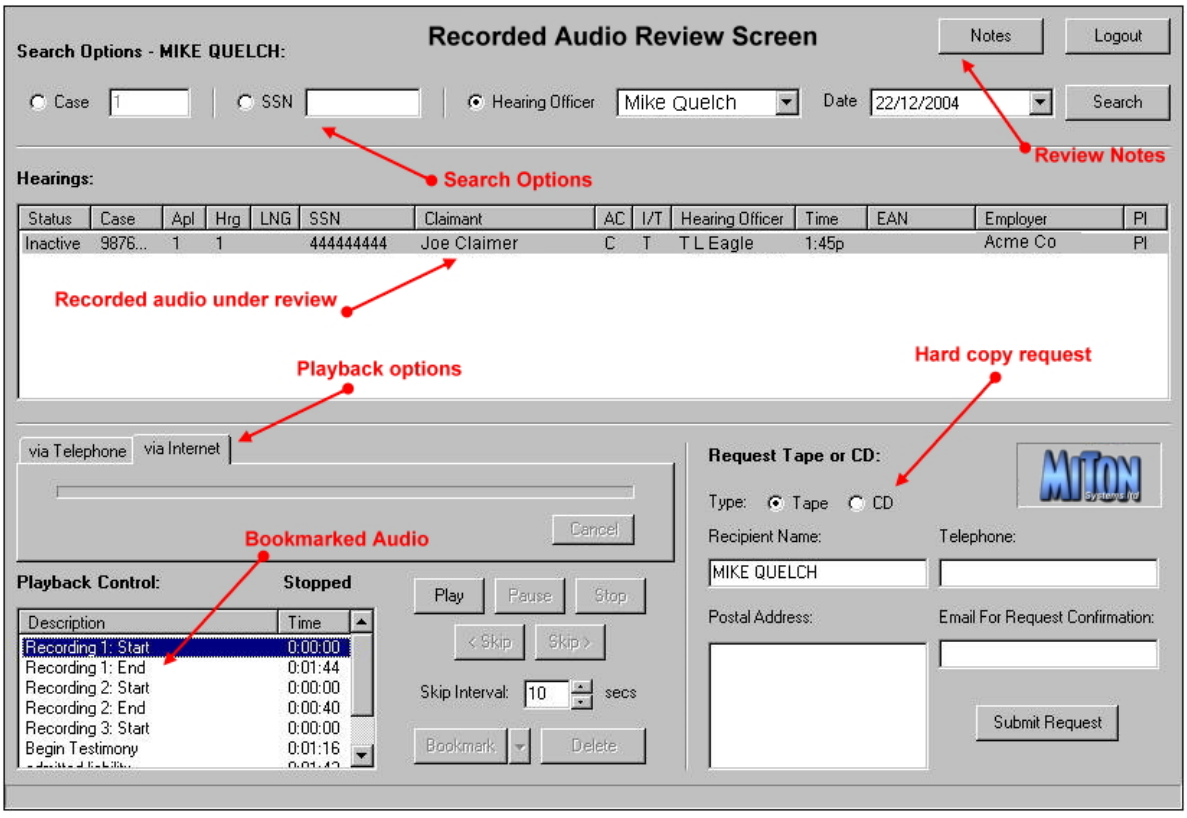


Figure 3: Audio Recordings Review Control

System Configuration and Access Modes

This section is relevant if the user purchases their own hardware for installation at their corporate offices. The diagram above shows how the conference bridge can be connected to a corporate PBX (Local telephone switch) or direct to the Public Telephone Network using traditional telephone channels such as Euro ISND (E1's) or USA T1 SPANS. European standards cater for 30 channels per E1, while USA standards cater for 23/24 channels per T1.

The Bridge is a self-contained unit which incorporates all the necessary components to operate the conference service.

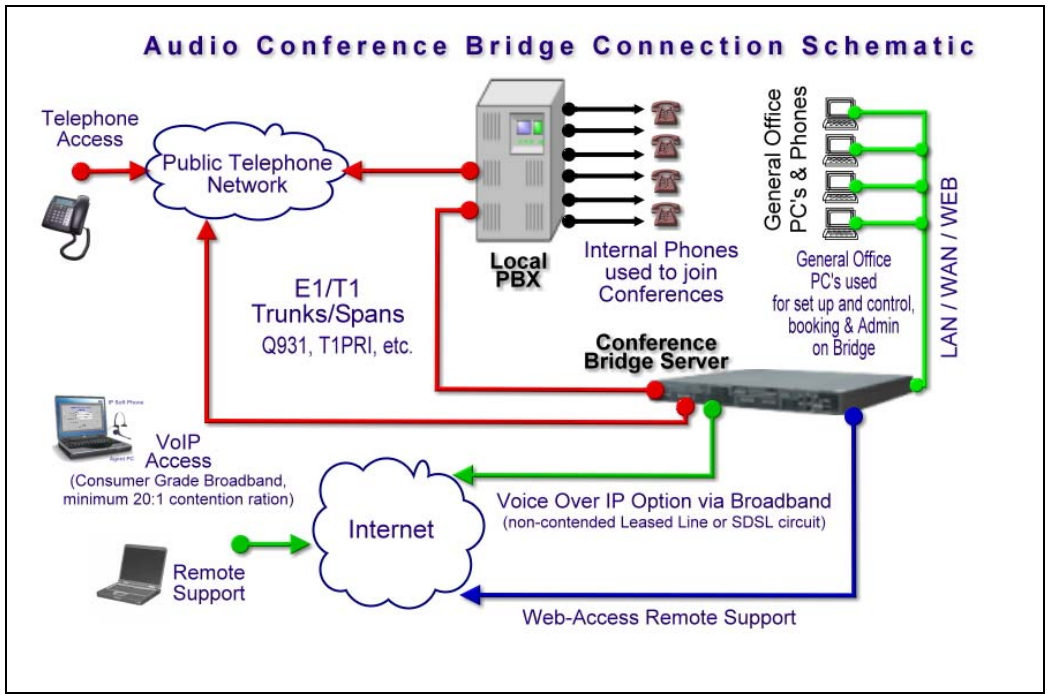


Figure 4: Connection Schematic

The Bridge has three main external connections:

1. Connection to the telephone network, either direct to the Public Telephone Network, or on the back of a corporate PBX, or both.
2. Local Area Connection for in-office set-up and control by Legal Professionals.
3. Broadband connectivity for remote home/office Legal Professionals and support by Miton Systems Ltd.

1. Connection to the telephone network, either direct to the Public Telephone Network, or on the back of a corporate PBX, or both.

The Bridge can either be connected directly to the Public Telephone Network, or be connected behind the PBX using standard telephony connectivity, or be connected to both simultaneously. If the Bridge is only connected via the PBX, then the local PBX must be direct dial enabled so that the Bridge appears as single PBX extension number to callers from the Public Telephone Network.

2. Local Area Connection for in-office set-up and control by Legal Professionals.

The Bridge is given an IP address such that it can be connected to the Corporate Local Area Network. This IP address in then used by Administrators and Users to access the built-in Apache Web server which manages PHP and Active X Web-Browser based pages for set-up and control. All transactions via these Web pages are logged

into a local MySQL database. In particular, Users call transaction records are logged as soon as they occur, which significantly reduces the chances of data-loss.

Users operate the system via General Office PC's using browser-based control screens, together with either a normal or VoIP telephone. The VoIP telephone can either be a stand-alone unit, or a PC-based soft phone.

3. Broadband connectivity for remote home/office Legal Professionals and support by Miton Systems Ltd

The third type of connection of the Bridge is to the Internet via Broadband. This is used by remote Users to access their control screens. It is also possible for them to use Voice over IP to talk to clients, thus eliminating telephone call costs. Miton also use this connection for remote support and preventative maintenance.

The diagram in Figure 4: Connection Schematic shows the possibility of external VOIP users via "Broadband minimum 20:1 contention ration". That is the specification for the remote user's internet connection, not that of the Bridge. If a Bridge is to support remote VOIP users, it can't be just put on a consumer-grade "broadband" ADSL or Cable connection; it should be on a non-contended Leased Line or SDSL circuit. If there are no remote VOIP users, then a consumer-grade broadband connection is perfectly suitable just for remote access and administration.

Ongoing Technical Support, Maintenance and Warranty

Technical Support

It is not possible to eliminate risk – we have to do what we can to minimise it, whilst keeping the costs versus risk reduction to acceptable levels.

In our experience, because of the specialist nature of our systems, the best way to proved effective continuous service of equipment is by:

1. Providing automatic regular error reporting from the Bridge of issues. The Bridges incorporate a detailed logging system which creates reports of events within the Bridge. These reports can be emailed to selected support personnel. These reports contain information that enables both preventative action to be taken, and also track down operational problems that may occur from time to time. The 'Log watch' as it is called, is a daily job that looks in the system log files - it understands what is in the logs and looks for odd occurrences. Examples include:
    a. disk space,
    b. Authorised logins and unauthorised attempts to log in
    c. messaging from hard drives reporting disk space and read/write errors that may point to a future failure
    d. Where the main services are running, and/or have been restarted
    e. Hardware monitoring of fan speed and processor temperature.
2. Providing Miton with secure internet access to the Bridge so that logs can be analysed and remote updates and maintenance can be achieved
3. Have key software services on the Bridge restart automatically when errors occur within them.
4. Empowering customer support personnel to provide first level support through the use of 1 above, and simple-to-use interfaces for checking system status.
5. Employing hot-standby backup server(s).

System areas for considering potential issues.

Errors within our systems are rare. We use Linux which is highly stable, and incorporates a firewall to prevent unauthorised access. We also use industrial specification PC's that have some built-in redundancy.

It is useful to segment the system in to areas when considering where potential issues may occur.

The System can be split down into four main areas.

1. Internet connectivity – is the Internet up and does the bridge have connection?

   Each Bridge has its own Web server, Internet connectivity can be simply checked by accessing this server via a remote web browser

2. The Miton Bridge Software – are the Miton software services running?

   This can be checked via a simple web page that is available to technical personnel.

3. The Miton Bridge Hardware – has there been a hardware failure?

   Power supplies and hard drives are duplicated so that if one fails then the system can carry on until the faulty part is replaced. It is difficult to check total hardware failure remotely, but a simple restart of the Bridge is probably the first thing to try.

4. E1/T1 Trunks and telco supply – do the telephone lines operate?

   Miton provide tools within the Bridge so that alarms on the trunks can be checked. If the lines are down, (this rarely happens in our experience) then contact needs to be made with the support centre at the telco so that this can be rectified.

In the event of a total failure with the main system, the stand-by server will need to be made live by Miton or our Customers IT Staff. This may involve using a local technician to swap cables for example.

Using the above principles we have successfully maintained consistent service of equipment in mission critical applications and also in remote countries such as Shell Nigeria, where even telephone contact is inconsistent.

It should also be noted, that Miton are able to upload system changes remotely without the need to be on-site. During the installation and commissioning process, Miton engineers will be on site, but once the system has been tested in a live situation it is anticipated that system maintenance will primarily be via the support access link. Where it is not possible to fix operational issues via this access link, Miton will provide on-site engineers.

Technical Support for the first 12 months at no extra charge:

1. Telephone 'Hot-Line' support during normal office hours
2. Secure internet access by Miton Systems for system day-to-day support
3. System software revision updates
4. Support Engineer(s) and Introductory Operator Training where necessary
5. Minor updates and changes to application and operational software
6. All documentation
7. Development of engineering support procedures so that user can eventually become self sufficient supporting the installation
8. Replacement of hardware due to failure
9. Telecom Network side of system support and issue resolution

Hardware Warranty

1. Telephony Hardware – 2 Years. Return for repair, or replacement
2. PC Chassis and all components, where supplied by Miton Systems Ltd – 2 years warranty. Return for repair or replacement.

Software Warranty

The Miton software is warranted for 12 months. Any implementation errors will be rectified free of charge within this period. Following this twelve months period and providing ongoing support is taken out, Miton will maintain the software to be free of operational defects.

Expansion of System

The system is expanded either by adding VoIP channels, which require no additional hardware, or by adding telephony cards with the required standard telephone connectivity: e.g. Analogue or digital. With this type of system, it is generally good practice to keep the maximum number of channels to 120 per PC Chassis. Larger systems can be achieved by clustering Bridges together. In this configuration a greater number of normal-sized conferences can be accommodated by distributing them across multiple servers.

Training

Miton's goal is to make Our Customers as self sufficient as possible with respect of on-going user training. Good training both minimises the support we have to give and makes good business sense. We have found that by investing time to make sure the Administrators are properly trained, and giving them clear lines of contact with Miton, that the required ongoing training is minimal. This coupled to our ability to remotely administer the Bridge, means that users get the maximum usage from our systems.

One day of training is included as part of the initial installation. The Bridge is quite straightforward to operate and maintain. It has been designed for a minimal training and support overhead. It is anticipated that users will quickly be able to use the system. Some may even be self taught. The important aspect here is that proper communications channels are set up between Our Customers and Miton so that on-going issues can be quickly assessed and recommendations made. Our experience shows it is during the first month of use of the Bridge in which most of the questions arise. We have in the past even changed standard voice prompts for some companies so that support questions are minimised. This is all included as part of the purchase of the equipment.

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