# Chapter 4 - The Internet and Telecommunications

## Computer Telephony

*Computer Telephony Integration* (CTI) merges the capabilities of computers and telephones, adding intelligence to the making and receiving of phone calls. This integration of computers with telephones offers the capability of controlling a variety of communication methods from one system.

CTI will allow users to extract data from the calling parties and use the data to drive and support their call processing, interactive voice response services, and a host of other computer based conversation and messaging services. CTI allows business transactions to be entered, edited, validated, updated, processed, and tracked. For example, we are all familiar with on-line banking services conducted over a telephone. Information in messages can be submitted, interpreted, acted upon and disseminated throughout an organization for workgroup computing and collaboration. Information can be formatted as voice, text, images, video, or any other form of recordable signals.

The core CTI technologies include:

- Voice recognition and voice to text processing;
- Text to speech voice output;
- Call processing;
- Facsimile services;
- Digital signal processing.

Interactive voice response permits a telephone caller to interact with an organization's information database through the use of touch-tone signals or spoken words (if equipped with voice recognition to obtain or enter information). With the universal use of telephones, multilingual capability, customizable, and speech recognition, CTI will become a valuable tool for the legal profession. For example, this technology can be applied to specific cases, or the court can use it for system schedules for the attorneys.

Basic information of a firm, such as the name, hours of operation, procedures, pager information, and so forth, can be easily accessible to the caller. Information can be obtained from telephone on pleadings filed, continuances, deposition schedules, payment reminders, instructions to client, case calendar and action plans, fax back for review of pleadings, posting

of court rulings, ability to schedule client conferences, and so forth.

The result is that voice calls will be supported with a complete set of data and information about the caller and the call process activities. The caller can access databases, create transactions, and follow up on previously generated information. This will produce more efficient and effective servicing of the parties and an improvement in performance and productivity of the organization and its resources. The interacting parties will have the results of their interaction directly linked into fact and business processing systems of the organization, resulting in a smoother and more automated response to the conditions and situation. This, in turn, should improve the attorney/client relationships between the parties, and increase the potential for business. CTI will support interactive voice processing, call centers, electronic data interchange, and a host of other attorney/client interfacing.

Application CTI toolkits include OmniVox™ ( www.apexvoice.com ).

*Voice mail* is a specialized type of e-mail system. Voice mail is a relatively simple, computer-linked technology for recording, storing, retrieving, and forwarding phone messages. It is called voice mail, or voice messaging, because the messages are spoken and left in a “voice mailbox.” The telephone doubles as a computer terminal, but instead of presenting the information on a computer screen, the system reads it over the phone line, using prerecorded voice vocabulary. The systems are based on special-purpose computer chips and software that convert human speech into bits of digital code. These digitized voices are stored on magnetic disks, from which they can be instantaneously retrieved. Callers are offered a menu of choices, and the messages they select are played, left in “voice mailboxes,” or they can access huge computer databases.

Voice mail messages will begin appearing in the “in-box” on your computer as voice mail is integrated with computers.

*Automatic Number Identification (ANI)*. ANI enables the caller’s phone number to be delivered to a database when the call arrives. The ANI system retrieves database records matching the caller’s number. For a law firm, this enables a client to be immediately routed to the appropriate associate or whoever is working on the file. The client management record can be immediately updated to reflect the call and other important client information. For the lawyer, these systems can automatically track an outgoing call to a client for the amount of time on the phone and subsequent invoices. Other telephone computer technology applications available include the

ability to receive and send e-mail, change schedules and change-meeting dates on databases by using a telephone and not a computer. The combining of the telephone and computer into a unified piece of client relation software promises strong utility and growth over the next several years.

*Multifunction Telephony Boards.* Multifunctional telephony devices integrate data/fax modems, fax reception and broadcasting to and from multiple users, paging services, multiple mailbox voice mail functionality, speakerphone and microphone for telephone conversations, Internet telephone capability, on-line connectivity software, and CD quality audio for around $100. These devices can provide a central management system for small or home offices. They consolidate e-mail, voice mail, and faxes, making them easy to retrieve even while on the road.

Some features to consider include:

- Call in voice mail retrieval;
- Forward voice mail to remote locations;
- Automatic paging service when messages and faxes are received;
- Fax on demand services;

- Password ID services for voicemail;
- Caller ID;
- Voice over the Internet software;
- DSVD Digital Simultaneous Voice and Data technology or Alternating Voice and Data (AVD);
- A sound chip;
- A CD-ROM/DVD Interface connector.