

Guide to Judiciary Policy

Vol. 6: Court Reporting
Ch. 3: Reporting Methods

Appx. 3C: Digital Audio Recording Technology Specifications

[§ 3C.10 Introduction](#)

[§ 3C.20 Digital Audio Recording Technology Overview](#)

[§ 3C.30 Mandatory Requirements for Digital Recording Systems](#)

[§ 3C.30.10 Digital Sound Processing](#)

[§ 3C.30.15 Confidence Monitoring](#)

[§ 3C.30.20 Multi-Channel Recording and Channel Isolation](#)

[§ 3C.30.25 Storage Mechanisms](#)

[§ 3C.30.30 Playback Access](#)

[§ 3C.30.35 Capability to Duplicate Digital Audio Recordings to Analog](#)

[§ 3C.30.40 Archival Storage and File Formats](#)

[§ 3C.30.45 Common System for Transcribers](#)

[§ 3C.30.50 Emergency Backup](#)

[§ 3C.30.55 Disaster Recovery Plan](#)

[§ 3C.30.60 System Security](#)

[§ 3C.40 Digital Audio System Needs Assessment](#)

[§ 3C.40.10 Centralized or Courtroom-Based System Configuration](#)

[§ 3C.40.15 Hardware and Software Compatibility and Network Capacity](#)

[§ 3C.40.20 Sound Systems](#)

[§ 3C.40.25 Record Annotation Options](#)

[§ 3C.40.30 System Integration Opportunities and Data Storage](#)

[§ 3C.40.35 Impact on Court Operations](#)

[§ 3C.40.40 Product Suitability and Customization Requirements](#)

[§ 3C.40.45 Records Management Issues](#)

[§ 3C.40.50 Transcription Issues](#)

[§ 3C.40.55 Training](#)

[§ 3C.40.60 Implications of Adding Courtrooms or Chambers to the System](#)

[§ 3C.40.65 Implications of Running a Mixture of Analog and Digital Systems](#)

[§ 3C.40.70 Emergency Backup Planning](#)

[§ 3C.40.75 Security Issues](#)

[§ 3C.50 Integration of Digital Audio Recording Systems and CM/ECF](#)

[§ 3C.60 System Acquisition and Implementation](#)

§ 3C.10 Introduction

These guidelines contain information for courts to use in performing self-assessments when considering or implementing digital audio recording technology. As a preliminary step, courts may wish to review *Digital Audio Recording Technology: A Report of a Pilot Project in Twelve Federal Courts* (May 14, 1999), a Federal Judicial Center report that includes an attachment entitled “Description of the Features of a Digital Audio Recording System.”

§ 3C.20 Digital Audio Recording Technology Overview

- (a) Digital audio technology involves a combination of sound systems (microphones and mixers), computers, and specialized software and/or hardware. These systems provide sound recordings in a digital format and also may provide annotation capabilities to automate log notes and tie them to the digital voice record. No simultaneous text or transcript is produced beyond the recorder’s log notes. Digital recording systems may be used with existing courtroom sound systems and may require a computer in the courtroom for the deputy clerk monitoring the record. This computer, as well as a computer for the judicial officer, if desired, may be linked to either the Data Communications Network (DCN) or used in stand-alone mode, depending on the design of the system. It should be noted these systems do not provide an instantaneous transcript in the courtroom, and they provide different services than those offered by realtime court reporting methods.
- (b) Digital recording systems typically provide the ability to append electronic court recorder log notes to digital voice files, which can then be transmitted to transcribers, judges, and court staff electronically. This technology allows judges and court staff to listen to the record from their own computers and can allow judicial officers and law clerks to make their own private annotations to the digital voice record, if desired.
- (c) This method of taking the record is replacing analog recording systems because it allows recorded information to be stored in digital format, which is consistent with other computer-integrated courtroom technologies. The digital format will permit integration of the record with other elements of electronic case management systems, such as docketing and imaging, thereby enhancing access to the record for judicial officers, chambers and clerk’s office personnel, the public, and the bar.

§ 3C.30 Mandatory Requirements for Digital Recording Systems

The AO has determined that only a limited number of requirements must be met to provide the basic recording function. By limiting requirements, the AO anticipates that

courts will have greater flexibility in taking advantage of ongoing technological advances and will be able to tailor systems to each court's unique environment without undue restriction.

§ 3C.30.10 Digital Sound Processing

A digital recording system must be able to convert the analog audio signal received from the microphones into a digital signal. Value-added elements may include mechanisms to boost or clarify the audio signal, or to save the recording in a compressed file format.

§ 3C.30.15 Confidence Monitoring

- (a) Confidence monitoring is a mechanism for ensuring that the audio signal has been recorded accurately to tape, disk, or other storage media. The mechanism accesses the already recorded signal from tape, disk, or other storage media (not the signal directly from the microphones) and transmits it to a headset worn by the electronic court recorder operator who then is able to check the quality of the recording.
- (b) A digital recording system must have safeguards to prevent accidental erasure or over-recording of the record and provide automatic error detection to ensure continuous, uninterrupted recording for clear playback and transcription. It also must include an output for a headset for "off-media" monitoring, and a playback speaker in the courtroom to permit replay of the record.

§ 3C.30.20 Multi-Channel Recording and Channel Isolation

- (a) The system must include multi-channel recording and channel isolation to keep separate the audio signals received from different microphones. Channel isolation provides the ability to listen to one channel of the recording while turning off the others. Isolating a channel is helpful for listening to or transcribing a playback without competing sound from other microphones.
- (b) For in-courtroom use, 4-channel recording is the minimum requirement, but in circumstances where 4-channel capability is not advantageous, such as in recording proceedings conducted over a telephone (for which only one signal source would be available), courts may suspend the requirement. All multi-channel digital audio recording systems must provide channel isolation capability.

§ 3C.30.25 Storage Mechanisms

- (a) All systems must be able to store the audio signal as a digital file. Typical options for doing this include storing the file on the hard disk of the recorder's workstation or on a local server. Some systems may also offer automated mechanisms for writing a copy of the session recording to secondary storage, either digital audio tape (DAT) or other high-capacity portable media, including writeable compact discs (CDs). System configurations that include a central server may also copy recording files to that server.
- (b) The DAT or other high-capacity media provides a mechanism for storing session material off-line, which can be restored to primary storage if older records no longer available on-line are needed. Copying data to a central server allows material from different courtrooms to be readily accessible to others.

§ 3C.30.30 Playback Access

All digital systems must provide the capability to listen to material that was previously recorded through playback in or out of the courtroom. Courts considering digital audio systems may wish to establish ease and extent of playback access as major criteria in selecting or configuring a system. Depending on the system configuration, access may be achieved from the court recorder's computer or from other networked locations such as computers in chambers. The ability to re-play recordings in chambers, on demand, without requiring assistance from the court recorder can be a major benefit offered by digital recording systems. Internet access is also a feature, and courts should ensure that adequate security measures are in place consistent with Guide, Vol. 15, Ch. 3 (IT Security).

§ 3C.30.35 Capability to Duplicate Digital Audio Recordings to Analog

- (a) Digital audio format will completely replace analog formats in the future. However, many attorneys and transcription services may not be equipped to use digital recording formats. Thus, courts implementing digital audio recording systems must maintain the capability to convert digital recordings to an analog format, typically on a cassette tape, as prescribed in current electronic sound recording guidelines in Guide, Vol. 6, Appx. 3B.
- (b) The necessary duplicating and reformatting equipment must be able to provide 2-channel, analog recordings for general public use. Courts also may use digital media, such as CDs, when providing copies of recordings to transcribers, attorneys, and/or the general public. It should be noted that the availability of audio files via internet access is possible, but may not be practical due to the large file size of the recordings.

§ 3C.30.40 Archival Storage and File Formats

- (a) Recordings or annotation notes made by digital audio systems must be available according to the record retention schedules. **See:** Guide, Vol. 10, Appx. 6A and Appx. 6B. Digital systems must be able to export files for archiving in a non-proprietary format. Alternatively, files may be converted to analog format using standard cassette audio tape or archived in digital format with an executable file that allows users to replay the recording independent of proprietary software.
- (b) Digital audio recording systems often use proprietary formats to store their data files. Thus, it is possible that recordings made in one court may not be accessed by a court that did not own a proprietary license for the vendor system that created the file. Similarly, as technology changes and new capabilities are incorporated into recording systems, even if a court is still using the same vendor, it may have a difficult time restoring a recording that is several years old. This situation would interfere with the clerk's responsibility to maintain a copy of the record that is accessible both now and in the future, according to records disposition schedules established by law or the Judicial Conference.
- (c) Currently, there are no approved file formats or storage media standards for digital audio files. However, the ".wav" format for digital audio is a publicly available, non-proprietary format that can be accessed from many different products and utilities. Standard ASCII text files can be used as a standard format for the session information and annotations. Records management issues and the need for a migration plan are discussed in § 3C.40 (Digital Audio System Needs Assessment).

§ 3C.30.45 Common System for Transcribers

- (a) The federal judiciary endorses and encourages an open-systems approach to the implementation of digital audio recording systems within the federal courts.
- (b) While the federal judiciary does not want to preclude arbitrarily any vendor from marketing products to transcription services, for transcription purposes digital audio recording systems used in the federal judiciary must be able to produce digital files in an industry standard format, such as ".wav" for audio or ASCII for text.
- (c) In addition, transcribers must have the capability of isolating channels and adjusting the volume for each channel to transcribe accurately the record without requiring the transcribers to purchase proprietary hardware or software system components.

- (d) To meet this purpose, digital audio files may be accompanied by an executable program that allows the receiving transcription service to listen to the recording, isolate channels, adjust volume, and view any related annotations.

§ 3C.30.50 Emergency Backup

- (a) Courts should ensure that appropriate backup measures are in place when using digital audio recording systems, including emergency equipment and procedures to be used when the primary recording system fails and is unable to take the record of a proceeding. Options include:
 - (1) having a spare computer with the digital recording system pre-loaded and ready for service to continue recording;
 - (2) using a low-end digital system, such as a laptop with a recording sound board to take the audio record and taking hand-written log notes; or
 - (3) reverting to a backup analog recorder and hand-written log notes.
- (b) The emergency plan also should include a method for entering the recording and any annotations taken with the backup system into the primary digital recording system so that there are no gaps in the material accessible through the digital system.

§ 3C.30.55 Disaster Recovery Plan

Recording systems must include plans for off-line backup of the audio files and annotations database, as applicable, for disaster recovery. DAT or other high-capacity media provide a secondary storage mechanism coupled with periodic backups of the disks on the servers or workstations provide preventive maintenance of the record.

§ 3C.30.60 System Security

Recording systems must include procedures to provide basic identity checking to validate the user. For systems that allow users other than court recorder operators, including judges, to make annotations or that allow users to declare their annotations “private,” there must be security procedures to lock and unlock those files. If internet access is offered, courts must install security measures consistent with the Guide, Vol. 15, Ch. 3 (IT Security).

§ 3C.40 Digital Audio System Needs Assessment

- (a) Extensive planning is a critical element in the successful implementation of a digital audio recording system in a federal court setting. Such

planning can be complex because there are so many components, interactions, and sources of information to consider, as well as the acquisition process and implementation. Conducting a needs assessment will aid courts in planning and successfully acquiring a digital audio recording system.

- (b) It is important that each court carefully assess its requirements, distinguishing between required and optional functionality. Courts may establish a task force to assist in determining the requirements of the court. The information gathered by a task force can provide judges, chambers staff, courtroom staff, and transcribers information about the operation of hardware, software, and networks.
- (c) Courts should consider the following critical areas when making preliminary assessments of their requirements.
- (d) System requirements should be standardized as fully as possible in each court to make providing system support easier and to reduce time and costs for training operators and judicial officers.

§ 3C.40.10 Centralized or Courtroom-Based System Configuration

- (a) Configurations for digital audio recording systems, distinguish between “stand-alone,” “networked,” and “central server” systems. “Stand-alone” refers to a configuration where all the components of the digital audio recording system reside on the court recorder’s computer in the courtroom. In “networked” configurations, some of the components of the digital audio system are located in the courtroom and some are located elsewhere. As long as all of the storage and access to the digital audio recording functions are maintained solely on the computer in the courtroom, it can be considered stand-alone — for example, even if the computer is also used to run e-mail over the network.
- (b) However, when a digital audio recording system function is performed over the network — for example, backups to a storage device — then it is considered to be a “networked” system. The networked system is described as being on the network and allowing other computers on the network to share access to the digital audio files on the main recording system in the courtroom. It also allows for the possibility of sharing storage devices and other peripherals that are on the network and not directly attached to the court recorder’s computer.
- (c) There may be two types of “stand-alone” configurations. The “isolated stand-alone” system is described as being totally isolated from the network and other computers, with all components physically attached to the court recorder’s computer located in the courtroom. The “participating

stand-alone” system is described as having all of the components for the digital audio recording system confined to a single computer in the courtroom, but that workstation is connected to the court’s network and can share in other network services for purposes not related to digital audio recording.

- (d) A “central server” configuration is one in which audio signals are sent from several courtrooms to servers and monitoring equipment in a single centralized control room. This approach requires less equipment in the courtroom and allows for more efficient use of servers, storage devices, and other peripherals. A court recorder in the central location records and monitors sessions being held in more than one courtroom at a time, logging one session while ensuring that the equipment is functioning properly in all others. A courtroom-based configuration maintains the recording, monitoring, and note-taking equipment and processes in the courtroom itself, with only long-term file storage in a central location.
- (e) Courts interested in pursuing the centralized option should be aware that because of the type and level of log notes taken in most federal courtrooms, a single court recorder would not be able to fully annotate the proceedings in multiple courtrooms. Thus, to the extent sound quality and an acceptable transcript depends on constant attention to the recording and on detailed log notes, central monitoring of multiple courtrooms is not recommended.

§ 3C.40.15 Hardware and Software Compatibility and Network Capacity

- (a) Digital recording equipment may require new hardware and software as well as changes in the court’s existing network configuration and computer systems support. It is important for the court to work with potential vendors to identify potential problems and opportunities. Each offeror must provide minimum specifications and cost estimates during the market research phase of the acquisition process, including:
 - (1) Understanding how the court’s existing hardware and software will be used, with or without upgrades in the digital recording system;
 - (2) Identifying additional hardware and software that would be required and how that would be integrated into the court’s current computer environment. In this regard, potential conflicts with existing hardware and software should be identified; and
 - (3) Performing a detailed analysis of existing network capabilities in relation to the additional requirements that would be imposed by a digital audio recording system. Determining additional server

needs and other network equipment or connectivity requirements. Assessing system integration issues.

- (b) All requirements for system purchase and installation must be established in the appropriate procurement documents. **See:** Guide, Vol. 14, § 230.30 (Statements of Work).

§ 3C.40.20 Sound Systems

Courts should also work with digital audio recording system vendors to determine if their existing sound systems are adequate for the products under consideration. If installation of a digital audio system would require modification to existing sound systems, the court should consider using the services of one of the AO's audio/video design term contractors available through the Office of Information Technology's Infrastructure Management Division. These designers can ensure that existing sound systems are modified appropriately to accommodate this new digital technology.

Note: Digital audio recording system vendors should not open, adjust, or work in the court's existing audio sound system cabinets since this could invalidate warranties or maintenance contracts on the sound systems.

§ 3C.40.25 Record Annotation Options

- (a) Using a digital audio recording system to take the record of a proceeding can offer advantages, such as improved sound quality, easier access through electronic retrieval or transmission, and inclusion as an element in an electronic case file.

In addition, digital audio also typically offers the opportunity to directly link the audio file to the recorder's notes (or annotations made by others) for easy search, replay, or transcription. Alternatively, digital audio can allow notes from an external source, such as WordPerfect, to be related to the audio file via time synchronization.

- (b) Courts interested in digital audio recording systems should consider the following issues related to record annotation:
 - (1) The advantages of an integrated note-taking/recording system may include better linkage between log notes and the audio file(s) to which they relate. Disadvantages may include the need for a database file to maintain the log notes, more difficulty in editing log notes, and greater reliance on proprietary formats;
 - (2) Using a separate note-taking system, such as WordPerfect, may offer the advantage of easier editing, reliance on industry standards, and less technical complexity. However, the lack of direct integration with the audio record may require greater user

set-up time and adversely affect the ability to access and play selected parts of the record;

- (3) In evaluating integrated or separate system designs for notetaking or any other digital audio features, courts should test all systems and procedures to ensure that they meet the court's requirements provided in the Statement of Work which should include:
 - (A) Evaluating the level of effort required to set up a recording session. Consider whether setup information can be adjusted from session to session or must be completely reentered each time;
 - (B) Determining whether the screens accommodate all of the information that court recorders and/or transcribers need to enter into the log, such as names and addresses for all attorneys;
 - (C) Considering whether court recorders can enter this information at a convenient time and without disruption to court proceedings;
 - (D) Considering whether the court recorder's notes can be edited after they are entered; and
 - (E) Evaluating whether electronic court recorders can maintain the same level of quality with the new note-taking system as they achieved with the older system of log notes.
- (4) Consult with the court's judges as to whether they want to take private notes from the bench that could be integrated with the audio record. If so, they should be involved in selecting the design.

§ 3C.40.30 System Integration Opportunities and Data Storage

Integrating a digital audio recording system with a court's case management system to import case information electronically can save data entry time and reduce errors. Consult with the case management system's designers and supporters as to the feasibility and costs of such integration. Each court should determine if this functionality is a system requirement and, if so, this requirement must be identified specifically in the court's Statement of Work.

§ 3C.40.35 Impact on Court Operations

A new recording system may have an effect on how the court functions. Courts must evaluate the following:

- (a) Modifications, if any, that may be required in current courtroom, chambers, or clerk's office procedures to accommodate a new way of doing business.
- (b) Physical impacts on the courtroom or other operational areas, including impact on courtroom aesthetics, court recorders' line of sight, and access to aisles and exits. Wiring issues and the ability to "hide" equipment should be reviewed carefully, particularly in older or ceremonial courtrooms.
- (c) Impacts on staffing, such as requirements for additional personnel for systems support and training.

§ 3C.40.40 Product Suitability and Customization Requirements

In considering the purchase of a digital audio system, courts must determine whether the product under consideration accommodates the way cases are handled (e.g., appellate, bankruptcy, district, or magistrate matters).

- (a) Carefully assess each product's capabilities and features to determine the extent of customization, such as special screens or "hot keys," that may be required to handle particular proceedings, including motion calendars or special cases, such as sealed cases. If special screens and/or "hot keys" are needed, establish a training period to ensure that staff are familiar with their functionalities and capabilities.
- (b) If customization is needed, the court must clearly identify if the responsibility for making the changes lies with the court or the vendor.
 - (1) If the vendor is required to customize the product, the court must ensure that the required customization is defined in the Statement of Work. A vendor's proposal should then address the changes to be made with performance deadlines. The court must also ensure that the contract includes a requirement to support the system in the future with all customization.
 - (2) If the court is to be responsible for customizing the system, the court must ensure that it has adequate technical expertise and determine the extent of assistance, including software, manuals, or technical support, that the vendor must provide to help make such customization possible. Also, the court should consider whether such customization would affect vendor support or warranty provisions.
- (c) Courtroom staff, including those responsible for electronic sound recording, should be involved in evaluating proposals. The court should arrange for an actual in-courtroom test of a product, rather than a simple

office demonstration, as well as an explanation of training requirements and the kind of training to be provided.

- (d) If possible, the court should consider visiting another court with a system already installed and operating.

§ 3C.40.45 Records Management Issues

Implementation of audio digital recording raises a number of records management issues. Central to these concerns is cost. Analog tapes require some maintenance over their record life span. Tapes deteriorate and must be stored in an acceptable temperature and humidity range. Digital records are susceptible to obsolescence of the software to read them and the hardware upon which they are stored. As a result, they need more care-taking and periodic refreshes for both hardware and software. For more information regarding retention of digital audio files, **see:** Guide, Vol. 10, Ch. 6 (Records Management); and Records Management page on JNet.

§ 3C.40.50 Transcription Issues

A court must assess the court community's need for transcription services. If transcripts are regularly needed either by judges or attorneys, the court must determine whether transcription companies are available to transcribe the record.

- (a) Courts may find that if judges can easily listen to the record in chambers, or attorneys have access to the record via the internet, the demand for transcripts may decrease.
- (b) Moreover, the court must consider the use of digital audio recording technology with transcription firms to assess the readiness of the firms to make the switch to digital transcription. The court has no responsibility to provide sufficient volume to make the transcription company's special equipment purchase worthwhile.
- (c) The court must determine how to send digital audio files to transcription firms via the internet or modem. Special procedures will be necessary for the transcription of sealed, redacted, and other sensitive proceedings.
- (d) The court must determine whether the equipment meets industry standards. Foot pedals that meet industry standards must be used. The transcription software must allow them to keep their hands on the keyboard as much as possible and have windows and fonts that are sizeable and capable of displaying more than one line of text at a time. And, to assist transcribers in the identification of speakers, the digital recording software must time stamp the log notes when a court recorder begins the log note rather than at the completion of the note.

- (e) The court must identify transcription service providers that can accommodate digital recording files.

§ 3C.40.55 Training

- (a) The training program must be tailored to the background and needs of the users, including judges and electronic court recorders, and must provide training materials and reference manuals that can be used after the training is completed. If a court's computer systems staff are to provide ongoing hardware and/or software support to users, they must be trained as well. With sufficient training, systems staff may be able to diagnose and, perhaps with telephone assistance from the vendor, resolve problems that would otherwise require site visits. Training requirements must be identified in the Statement of Work.
- (b) Responsibility for training should not fall entirely on the vendors. A court must help by identifying user needs (e.g., the level of computer literacy and/or the type and nature of tasks to be performed) and by scheduling uninterrupted training that includes hands-on courtroom experience as appropriate to the user. If users need basic computer training, the court should arrange for it to occur prior to training on the digital recording software. Courts must be willing to set aside sufficient time for on-going training and accommodate individual training needs as necessary.

§ 3C.40.60 Implications of Adding Courtrooms or Chambers to the System

- (a) Courts wishing to "phase in" digital recording in a few courtrooms at a time must adhere to all procurement authority limitations. **See:** § 3C.60 (Systems Acquisition and Implementation).
- (b) Courts using a centralized digital audio design that want to install systems in additional courtrooms must be aware that existing equipment and services may need to be enhanced to support expansion. Adding courtrooms to these systems will necessitate changes to existing hardware, requiring more support from systems staff, and may necessitate hiring personnel for that purpose.
- (c) Contractors may be required to support infrastructure changes. It will be up to the court to coordinate the efforts of the various contractors so that each contractor can perform its responsibilities effectively. A good way to handle multiple contractors is to bring them together periodically for coordinating meetings.

§ 3C.40.65 Implications of Running a Mixture of Analog and Digital Systems

Courts may decide to use digital recording systems in some, but not all, courtrooms that currently use analog electronic sound recording. Issues to consider include the following:

- Use of mixed recording modes may undercut the advantages of eliminating the older analog technology,
- Electronic court recorders may not be able to substitute for each other in different courtrooms unless cross-training is provided for on both systems,
- It may become complicated to produce tapes and obtain transcripts due to storage of the record in different modes and in different locations, and
- Integration of existing analog systems with new digital systems is problematic because the sound quality may be impacted adversely if parallel systems are maintained.

§ 3C.40.70 Emergency Backup Planning

- (a) Courts may run their analog systems in parallel with the new digital systems as long as they deem necessary to mitigate risk to the record in the event of a malfunction. For courts that continue to use this mode for backup, the issues cited above regarding maintaining older technology, training, and locating recorded material will persist. Also, a major issue to be considered may be the need not only to split the audio signal from the microphone to feed into both the analog and digital systems, but also to amplify the signal to serve both recording systems. In some cases, installation of special equipment may be required.
- (b) An alternative to an analog backup is to have an emergency “crash cart” pre-loaded with the digital audio system that can be substituted quickly in the courtroom if a system fails. However, there are drawbacks to this approach. The first is the cost associated with buying and maintaining an emergency backup, which must be kept current (i.e., loaded with current versions of the software and possibly even the function key “shortcuts”) so that it can be substituted in the middle of court proceedings. Second, use of a crash cart resolves problems that arise from a faulty workstation in the courtroom, but would not necessarily compensate for server or network problems.
- (c) A second alternative that might be considered is use of a digital mini-disk recorder or laptop with sound input for emergency backup in court. This machine would not be able to reproduce a multi-track recording, but it could be substituted easily during a short break in proceedings. Since

such a digital recorder would only record audio, the electronic court recorder would have to revert to handwritten log notes. This approach addresses the cost and technology issues but does not address the problem of having the log notes in a non-digital format. This potentially could be solved if the digital audio files from a different source, such as a mini-disk, could be transferred into the principal digital recording system with log notes to be added at a later time.

§ 3C.40.75 Security Issues

- (a) Digital audio recording systems require a security plan consistent with Guide, Vol. 15, § 310.20.10 (System Security Plans). This plan is a written assessment of the security risks associated with the system, and how these risks have been mitigated, including countermeasures or defenses put in place.
- (b) In addition to the guidance in Guide, Vol. 15, § 310.20.09, the information security plan for a digital audio recording system, would also include, but not be limited to, the following items:
 - (1) The means to authenticate valid users of the system, and written procedures covering authorized users and uses of the system,
 - (2) System level access protections allowing different kinds of access for different types of users, including features allowing locking of “private” annotation files,
 - (3) Protections for the possible inadvertent connection to a building LAN that could allow access to unauthorized users,
 - (4) Protections for problems resulting from sending digital files to authorized users (such as transcription services) over transmission media that would allow access by unauthorized users (e.g., sending unencrypted files over the internet),
 - (5) Protections for the possible tapping of cables carrying such information,
 - (6) Protections for other unauthorized listening to sealed or other sensitive court proceedings,
 - (7) Written backup and recovery procedures to ensure availability of the files and also to prevent unauthorized access to backup media of sensitive proceedings, and
 - (8) To the extent that the court opts to make digital audio recordings publicly available through the internet or other electronic means,

procedures must be in place to ensure privacy and protect sensitive information and to preclude malicious or inadvertent disclosure or alteration.

- (c) Each court must develop its own procedures and ensure that the system handles and secures sealed and other sensitive matters.

§ 3C.50 Integration of Digital Audio Recording Systems and CM/ECF

Many courts have given considerable attention to the integration of digital audio recording records with the Case Management/Electronic Case Files system (CM/ECF) to improve the overall efficiency and effectiveness of court operations. Courts have expressed an interest in several processes for integrating digital audio recording records with CM/ECF.

§ 3C.60 System Acquisition and Implementation

The court must develop a statement of work and select an acquisition method. **See:** Guide, Vol. 14, Ch. 2 (Procurement Planning and Preparation) and Ch. 3 (Purchasing Methods).