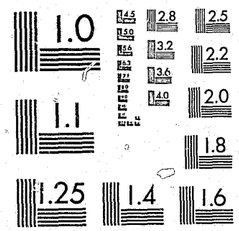

FJC Staff Paper

COMPUTER-AIDED TRANSCRIPTION: A SURVEY OF FEDERAL COURT-REPORTERS' PERCEPTIONS

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COMPUTER-AIDED TRANSCRIPTION: A SURVEY OF FEDERAL COURT REPORTERS' PERCEPTIONS

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This publication is a product of a study undertaken in furtherance of the Center's statutory mission to conduct and stimulate research and development on matters of judicial administration. The analyses, conclusions, and points of view are those of the author. This work has been subjected to staff review within the Center, and publication signifies that it is regarded as responsible and valuable. It should be emphasized, however, that on matters of policy the Center speaks only through its Board.

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I. BACKGROUND

Court Reporting and Technology

One commonly perceived problem in judicial administration is the need to reduce the excess time and cost required to prepare the official transcript of trial proceedings for appellate review. This is hardly a new problem, nor one confined to the federal courts.[1] It is, in and of itself, an issue significant enough to have elicited comments by various national commissions and committees.[2]

In recent years, the federal judiciary has assessed and introduced computer technology into various facets of the judicial process.[3] Studying the use of computer technology

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1. See P. Carrington, D. Meador, & M. Rosenberg, Justice on Appeal (1976).

2. National Advisory Commission on Criminal Justice Standards and Goals, Courts, (Recommendation 6.1), at 140-41 (1973); ABA Standards Relating to Criminal Appeals, Commentary to Standard 3.3 (1969); ABA Standards Relating to Appellate Review of Sentences, Standard 2.2 (1967).

3. See e.g., A. Sager, An Evaluation of Computer-Assisted Legal Research Systems for Federal Court Applications (Federal Judicial Center 1977) (computer-assisted legal research systems have been installed in federal court libraries); Federal Judicial Center Annual Report (Federal Judical Center 1979 & 1980) (computer-based information systems are used in over forty-five district and circuit clerks' offices providing a variety of management information services and reports); J. Greenwood & L. Farmer, The Impact of Word Processing and Electronic Mail on United States Courts of Appeals, (Federal Judicial Center 1979) (word processing, text processing, and electronic mail devices are located in many judges' chambers).

to support the recordation and the preparation of official court transcripts is part of this broader effort to apply technology to assist judicial administration functions. There are a variety of technologies available to improve court reporting services and to expedite the transcript preparation process.[4] The use of computer technology has been advocated as a possible way to improve and expedite the court reporting process.[5]

Computer-aided transcription, referred to as CAT, is a computer technology that has the potential to improve judicial administration. CAT was designed to expedite the stenotype method of recording and transcribing court reporter machine stenography notes ("stenonotes") into English narrative. This report describes the use of computer-aided transcription in the federal courts and assesses why this technology is not used more extensively.

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4. At least seven court reporting technologies are now in use among state and federal court jurisdictions to record and transcribe court proceedings. See J. Greenwood & D. Dodge, Management of Court Reporting Services, Section II: Court Reporting Techniques (National Center fo State Courts (NCSC), 1976) for an explanation and comparison of these technologies.

5. National Advisory Commission on Criminal Justice Standards and Goals, supra, note 2.

Use of CAT

There has been rapid growth within the past two years in the use of CAT, particularly among freelance reporters (stenotype reporters principally reporting depositions, conferences, business meetings, and government hearings). According to industry representatives and analysts, there are almost 400 separate CAT systems, located in almost every major metropolitan area in the country, servicing over 1800 stenotype reporters, and producing a total of over a million pages of transcripts per month. While the acceptance of CAT among federal and state court reporter officials has been more restrained than among freelance reporters, some state court jurisdictions have installed CAT systems.[6]

Several studies on CAT technology[7] have been completed in the past few years and recent articles on CAT have appeared in the American Bar Association Journal and the Judges' Journal. Some federal judges and administrators have been exposed to the technology at presentations before national and circuit seminars and conferences.

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6. According to industry representatives and the CAT Analysis Project staff at the National Center for State Courts, fifteen court-operated or court-sponsored CAT systems presently are operating or on order.

7. CAT Analysis Project Staff, Computer-aided Transcription in the Courts, (NCSC 1981); J. Greenwood & J. Tollar, Users Guidebook to Computer-aided Transcription, (NCSC 1977); J. Greenwood & J. Tollar, Evaluation Guidebook to Computer-aided Transcription, (NCSC 1976).

Some jurists and administrators have suggested that the infusion of federal funds and resources into CAT, and revisions in policies to emphasize CAT reporting standards, could remedy most of the existing federal transcript and court reporting problems.

Yet the federal judiciary does not have any precise data on the number of CAT users among official federal court reporters working within the federal district courts; nor does it have available any comprehensive information or assessment from those most directly involved, the federal court reporters who are actively using CAT.

The primary source of information for this report derives from structured interviews with fifty-eight federal court reporters who used CAT in 1980. Before reporting the results of those interviews, however, it is necessary to explain briefly the federal court reporter system and to describe what computer-aided transcription is.

Federal Court Reporter System

The Administrative Office of the United States Courts indicates that there are 550 official federal court reporters (and an undetermined number of contract reporters) working in the United States district courts. The employment and duties of these court reporters are contained in 28 USC 753. The number of court reporters assigned to a district court, the job qualifications, and specific job duties are determined by the Judicial Conference of the United States. The court reporters are subject to the

supervision of the appointing court, the Judicial Conference, and the Administrative Office.

The statute requires court reporters to attend every court proceeding designated by rule or order of the court or by a judge and to record verbatim all district court proceedings. Reporters are appointed and compensated by each district court according to policies and standards formulated by the Judicial Conference of the U.S. Courts. In most district courts a reporter is assigned exclusively to one district judge, although that is not required by statute.

Reporters are paid an annual salary to take the official record of proceedings; they may charge and collect additional fees for transcripts ordered by any parties, including the United States. Reporters are directed by statute to transcribe promptly and to deliver certified copies of the record of court proceedings to the court and the requesting parties. Official full-time court reporters are free to engage in freelance reporting work whenever their schedules permit, unless they are restricted by a judge.

According to this study, some of these reporters are now using CAT but they represent only approximately 10 percent of federal court reporters. Almost all federal court reporters use the stenotype reporting method.

Explanation of CAT

CAT is of practical value only for a stenotypist reporter, i.e., a reporter using machine shorthand. The stenotype reporter uses a modified stenotype recording device that can record electronic impulses representing stenotype symbols onto a magnetic cassette tape or directly into a minicomputer. The computer into which the electronically recorded symbols are fed uses specialized computer dictionaries to translate the electronic stenotype symbols into English narrative. Several companies now produce and sell CAT equipment and services.

Since no two reporters follow exactly the same stenotype, each reporter must develop his or her own personal translation dictionary. The "first-run" translated text can be displayed on a computer terminal or printed, but the court reporter or a member of the reporter's support staff electronically edits the transcript further to produce a final printed copy of the transcript.

Both traditional manual transcription and CAT methods are multi-step, labor-intensive processes. However, CAT shifts most of the initial translation and typing burden from the notereader (an individual other than the official court reporter who reads the stenotype notes and transcribes these notes into an English narrative) or reporter to the computer. In most situations, the court reporter must still be substantially involved in the transcript preparation process, although the reporter becomes primarily a specialized editor and "electronic" typist. Some reporters employ "scoopists", a specially trained notereader or typist, at

additional expense to undertake the electronic editing and review process.[8]

The introduction of almost any computer technology into the judicial process can be a complex and lengthy process. The implementation of a unique computer application, such as CAT, into court administration may be particularly formidable. Contrary to popular belief among some jurists and administrators, CAT technology is not a completely automated package that works without significant human intervention and control. The degree of success in implementing a CAT system corresponds to the degree of preparation and continuous management of a CAT system by the users, the careful development of appropriate computer software and hardware to meet the user's needs, and most important, a strong commitment among the court reporters to be trained to use the technology. CAT currently assigns the court reporter the major role and responsibility. The computer technology can only aid and support the court reporter, and will be no better than the basic stenographic skills and the motivation of the reporter.

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8. For more detailed explanation and analysis of CAT technology, see note 7 supra.

II. PROJECT OBJECTIVES

The primary objective of this study is to gain firsthand knowledge and information from federal court reporters most involved with CAT. The purposes of this study are:

1. to identify how many federal court reporters are employing CAT technology and to tabulate the type and manner of their CAT use
2. to solicit ideas and comments from federal court reporters using CAT about how well CAT technology has improved court reporting services and transcription production within the federal judiciary; and to determine their assessment of the primary benefits derived from this technology
3. to discover, from the court reporters' perspective, the primary reasons why CAT has not grown more rapidly in popularity among official court reporters compared to freelance reporters
4. to obtain court reporters' opinions and suggestions about increased financial and administrative support by the federal judiciary for CAT technology

The study was not intended as a definitive or comprehensive evaluation of existing CAT services and systems available nor was it intended to evaluate in detail the economic, production, or productivity issues pertaining to CAT. This study did not attempt to measure or assess the causes of existing transcript delays in the federal courts, nor the impact of transcript delay on the overall delay in the courts.

III. METHODOLOGY

The primary data collection method used in this study was a structured telephone interview with each federal court reporter using CAT technology. The interviews provided information on the typical CAT user, the CAT equipment and in current use and how such equipment was acquired, the reasons that led federal court reporters to institute the use of CAT, the successes and disappointments associated with CAT use, and the reporters' assessment of the potential value of CAT in the federal courts and of court sponsorship of the use of CAT technology.

The telephone interview included three types of questions

1. demographic and background information concerning the court reporter, his or her reporting activities, and the type and method of CAT utilized;
2. several open-ended questions concerning the reasons the court reporter undertook CAT, the benefits of CAT, suggestions for CAT support and involvement from the federal judiciary, and reasons for limited involvement with CAT by federal court reporters;
3. specific "forced-response" policy questions concerning the economics, hiring and training standards, and productivity and production goals associated with the adoption of CAT technology.

Table 1 contains a list of all standard questions asked each reporter. Each reporter was allowed to elaborate on any issue.

For purposes of this study, a CAT court reporter was defined as any federal court reporter (either an official federal court reporter or a full-time contract federal reporter as of January 1, 1981) who used CAT anytime between July 1980 and January 1981.

TABLE 1

COMPUTER-AIDED TRANSCRIPTION
TELEPHONE INTERVIEW QUESTIONNAIRE

Background Questions

Location of employment (District Court)

Years of experience:
as an official federal court reporter
as a CAT reporter

Type of CAT system and equipment configuration

Amount and type of CAT usage:
for official court transcripts
for freelance work
for sharing computer resources with other official and freelance reporters

Ownership/leasing/servicing of CAT system

Open-ended Questions

Why did you decide to use CAT?

What benefits have you obtained by using CAT?

Why are not more federal reporters using CAT?

In what ways should the federal courts help support the use of CAT and encourage reporters to use CAT?

Do you have any comments pertaining to the logistics, maintenance, reliability, and resource requirements needed to properly use CAT?

TABLE 1 (Continued)

Specific Questions ("forced responses")

Do you believe the total cost of CAT is economically competitive compared to alternative transcription methods?

How much does it cost per page to produce CAT transcripts?

Should the federal courts provide (a) direct financial subsidies for CAT and/or (b) equipment or CAT services to federal court reporters?

Will CAT eliminate reporters' difficulties meeting the existing thirty day transcription deadline?

In the near future, should new federal court reporters be required to demonstrate CAT proficiency before being hired as full-time official reporters?

How much time is required to sufficiently train reporters and to develop their computer dictionairies in order to become reasonably proficient on CAT?

A court reporter or administrative representative in each of the ninety-five district courts was contacted to obtain names of court reporters who might be using CAT system. In addition, several past and present officials of the National Shorthand Reporters Association and the United States Federal Court Reporters Association were contacted to solicit potential interviewees. Each official court reporter interviewed was asked for the names of any other federal court reporters who might be using CAT.

A total of sixty CAT official federal reporter were identified. Fifty-eight court reporters were contacted and all agreed to participate in the study.[9] The interviewees were promised anonymity in their personal responses. The telephone interviews were conducted in December 1980 and January 1981.

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9. After the telephone survey was completed and tabulated, two additional federal court reporters were located who began using CAT beginning in the fall of 1980. Because of time constraints, these two reporters were not contacted by the research staff.

IV. SURVEY FINDINGS

Profile of a Typical CAT User

A total of sixty official federal court reporters used CAT during 1980, and as of January 15, 1981 fifty-five official federal court reporters continue using a CAT system. These reporters are working in twenty-nine of the ninety-five federal district courts. Most CAT reporters work in the Second, Fifth, and Ninth Circuits. (See table 2).

The typical CAT reporter in the federal courts has eight to nine years' experience as a federal court reporter and has used CAT for one and one-half years--an amount of time far in excess of requirements for basic training and "start-up" developments (See table 3). Generally neither the reporter's age nor the length of federal court reporting service appears related to the adoption of CAT. An increasing number of newly hired federal court reporters had worked with CAT before being employed by the federal judiciary.

While CAT has a growing popularity in the freelance market, only a few federal contract reporters, who are usually freelance reporters, are using CAT (See table 2). In most cities, CAT reporters are in great demand. Due to compensation rates and market conditions, most freelance reporters prefer the more lucrative and competitive freelance reporting market than official court reporting.

TABLE 2

FEDERAL COURT REPORTERS
WHO USE COMPUTER-AIDED TRANSCRIPTION

Circuit	District	Number of CAT Reporters	Circuit	District	Number of CAT Reporters
First	D.Mass.	3[a]	Sixth	E.D.Mich.	1
Second	D.Conn.	1[a]	Sixth	W.D.Mich.	1[b]
Second	S.D.N.Y.	12	Sixth	W.D.Tenn.	1
Third	D.N.J.	2	Seventh	C.D.Ill.	1
Third	W.D.Pa.	2	Seventh	D.Wis.	1
Fourth	E.D.Va.	2	Eighth	D.Neb.	1
Fourth	D.W.Va	1	Eighth	D.N.D.	1
Fifth	N.D.Ala.	1	Ninth	N.D.Cal.	3[c]
Fifth	M.D.Fla.	1	Ninth	C.D.Cal.	6[c]
Fifth	S.D.Fla.	2	Ninth	D.Ore.	5[b]
Fifth	N.D.Ga.	1	Ninth	W.D.Wash.	1[a]
Fifth	M.D.Ga.	1	Tenth	D.Colo.	2[a]
Fifth	E.D.La.	1	Tenth	D.Okla.	1
Fifth	D.Miss.	1			
Fifth	N.D.Tex.	2			
Fifth	S.D.Tex.	2			

[a]There are three contract court reporters using CAT who regularly report federal court proceedings.

[b]Two federal court reporters using CAT were identified after the completion of the telephone survey.

[c]Five federal court reporters (two in the Central District of California and three in the District of Oregon) were interviewed but they stopped using CAT between July and December 1980.

TABLE 3

SURVEY OF YEARS OF EXPERIENCE OF
FEDERAL COURT REPORTERS ON CAT

Years of Employment as Official Federal Court Reporter

Number of Years	Percentage of Sample
1 (1980)	10
2-3 (1978-79)	14
4-5 (1976-77)	3
6-7 (1974-75)	17
8-9 (1972-73)	9
9-10 (1970-71)	9
11-12 (1968-69)	5
13-14 (1966-67)	12
15+ (1965 & Earlier)	16
Other (Contractor Reporters)	5

Starting Year for Computer-aided Transcription

Year	Percentage of Sample
1981	3
1980	33
1979	33
1978	22
1977	7
1976	2

Note: Percentage of reporters using CAT before becoming official reporter: 12%

At this time, one CAT vendor clearly has a major share of the existing CAT market among federal court reporters (See table 4) and among freelance reporting firms. However, within the past year, several other companies have introduced new CAT systems that are competitive both in terms of performance and pricing. Three CAT manufacturers have substantially penetrated the market of the official court reporters who have begun using CAT in the past 6 months.

Some stenotype reporters, particularly those with freelance reporting firms, have purchased CAT equipment. Even with tax incentives, the cost of a CAT system remains substantial. The cost for directly purchasing a basic CAT system that will normally support one to five reporters ranges from $38,000 to $75,000. While a variety of leasing and rental options are available, many official reporters still find the $10,000 to $30,000 annualized costs necessary for proper support of a leased CAT system to be substantial. While a large number (71 percent) of federal court reporters using CAT claim sole or shared ownership of a CAT system, many of these reporters have signed five to seven-year leases on the equipment (See table 4).

Another alternative, currently used by some (29 percent) of the federal CAT reporters, is to contract for most CAT services from an outside CAT reporting service, either a freelance firm or another official court reporter (See table 4). The court reporter still must purchase or lease a modified stenotype device, but most of the computer equipment is the responsibility and finan-

TABLE 4

FEDERAL COURT REPORTER SURVEY
TYPE OF CAT SYSTEM AND APPLICATIONS

CAT Vendor	
Baron (Datapoint)	74%
TSI (AM/Jacquard)	14%
Cimmaron-Stenograph (Texas Instruments)	10%
Other	2%
Ownership vs. Service Bureau	
Sole Ownership	21%
Shared Ownership	50%
Partial Outside Service Bureau (own editing work station; translation and printing provided by service bureau)	12%
Solely Use Service Bureau	17%
Utilization of CAT System	
Self-sufficient without Freelance Work	2%
Self-sufficient with Freelance Work	9%
Share System with Other Official Reporters	43%
Share System with Freelance Reporters	47%
Proportion of Official Transcript Produced on CAT	
All or Almost All (86-100%)	48%
Most (33-85%)	7%
Some (11-32%)	26%
None or Negligible (0-10%)	19%
Amount of Freelance Work	
Substantial	38%
Some	14%
None (or negligible)	48%

cial burden of another reporter. These reporters may pay a higher per page premium for the translation and editing, but they have substantially lowered their financial risk.

While many court reporters ultimately would prefer to have their own CAT system, present economics in most circumstances make the one-reporter systems prohibitive. Only a single federal court reporter interviewed could afford to operate his CAT system solely for the production of official transcripts; and only 10 percent of the CAT federal reporters had sufficient combined official and freelance transcript production to be self-sufficient on a CAT system (See table 4). Almost all federal CAT reporters (90 percent of the reporters interviewed) must share CAT systems either with other official or freelance reporters in order to maintain sufficient transcript volume and revenue to support a CAT system.

Reasons for Using CAT

CAT excels in assisting reporters in the preparation of daily or expedited transcripts or reports. Some federal court reporters use CAT primarily for the production of high priority transcript copy or freelance work, often where premium transcript rates may be charged, but use traditional transcript production methods for regular official transcript production. Other CAT reporters transcribe all their notes on a CAT system (See table 4). The reporters interviewed are almost evenly divided between those that are and are not involved in outside freelance work.

The primary reasons federal court reporters instituted CAT fall into a few general categories (See table 5):

1. the growing unavailability in many jurisdictions of sufficient numbers of competent support personnel (notereaders and typists)

2. the expectation that the technology will easily and rapidly provide the court reporter greater transcript productivity and easier and more efficient transcript production

3. the desire to reduce transcript costs or at least help to stabilize the rising transcript production costs usually caused by higher support personnel compensation

4. the recognition that the official court reporter must remain innovative and economically competitive with competing reporting firms (particularly in the freelance marketplace) and competing court reporting technologies (such as electronic recording); and offer clients better and expanded reporting services (particularly for the larger law firms, major corporations, and government agencies)

5. the tremendous advantages of competing in the freelance reporting market (depositions, conferences, hearings, litigation support projects, etc.)

6. the long-term frustrations and time-consuming process involved in the traditional dictation reporting method that requires an extensive amount of court reporter and typist time. According to the National Center for State Courts' CAT Analysis Project staff, for every one hour of court testimony (equivalent to approximately forty typescript pages), the official court reporter must spend two and one-half hours dictating and proofreading and a typist an additional two and one-half hours typing the document.

Experience with CAT: Successes and Disappointments

Several important reporter expectations have been met (See table 6). CAT transcripts are substantially better in appearance and provide a higher quality professional record. The number of typographical errors is considerably reduced. CAT has also helped many court reporters to improve their stenotype writing

styles and become more proficient and accurate in taking the original record at judicial proceedings.

Many CAT reporters now prefer CAT over any traditional transcription method (dictation, direct typing, or notereading). They like the increased direct control they have over all stages of the transcription process, including the scheduling and quality control of the final product. CAT has eliminated the drudgery, physical discomfort, and tedious tasks involved in the dictation method.

On the other hand, some important expectations do not appear to have been met convincingly. Most surprising is the finding that 60 percent of the federal court reporters using CAT have found no appreciable improvements in transcript efficiency. Thus, while an appreciable number of CAT federal court reporters (40 percent) have obtained significant improvements in their transcript efficiency and have been able to decrease or eliminate most transcript delays, over half have not. Indeed, 20 percent of reporters interviewed reported an increase in transcript preparation time after adopting CAT (See table 6). The inefficiencies were related to the availability and location of the CAT system, the unreliability of the computer printers and computer failures, the inefficiency of the translation software (computer dictionary), and excessive text-editing time.

Court reporters using CAT expressed disappointment with the extensive and excessive amount of time required by each reporter to "build" their computer translation dictionaries and the time

TABLE 5

PRIMARY REASONS FOR USING CAT

Limited supply of support personnel for transcript preparation; unavailability of reliable typists and competent notereaders	50%
Efficient transcript production; greater productivity	24%
Court reporting system of the future; innovative, modern transcription approach	19%
Other co-workers using CAT; asked to participate	17%
Dislike or physical disability using dictation method	15%
Economic savings; stabilize transcription costs	12%
Burgeoning transcript workload/transcript backlog	12%
Easier method of transcript preparation; less mental and physical fatigue	12%
Primarily for freelance work, not for official work	12%

TABLE 6

PRIMARY BENEFITS OF USING CAT

Decrease in transcript preparation time; greater transcript productivity	40%
Higher quality transcript with fewer errors or typographical errors; more professional finished product	31%
Less dependent upon support transcription personnel (typists, notereaders)	19%
Increase court reporter control of transcript product; greater work autonomy in preparing work product	14%
Help improve stenotype writing style; cleaner stenotype notes	12%
More personal free time; improve lifestyle	10%
Very beneficial for daily or expedited transcript production	10%
Very beneficial for freelance work (deposition, convention)	10%
Eliminate dictation method for transcript preparation	10%
Easier proofreading and editing	9%
Cost-effective; can increase income	9%

PRIMARY LIMITATIONS OF USING CAT
(unsolicited comments)

No change in transcript preparation time	39%
Increase transcript preparation time	21%
Provide no specific benefit	21%
Extensive training and dictionary building time required substantially exceeding expectation; require many extra hours on weekends and nights	21%
More expensive than anticipated; too expensive; many hidden costs	12%

to reach reasonable levels of proficiency, especially with respect to the accuracy of the "first-run" transcript. Many reporters severely underestimated the extra time necessary for sufficient training and dictionary building. Some reporters felt misled by vendor representatives.

Some vendors and research analysts suggest that with sufficient transcript volume and with appropriate controls and motivated reporters, CAT use in the courts will not only be economically competitive but can substantially underprice traditional transcription techniques. To date, the nationwide experience among federal court reporters does not support this contention. The median cost per page for producing a CAT official transcript is approximately $1.00 (See table 7). For most federal court reporters using CAT (75 percent), the total CAT costs still exceed the costs for employing a more traditional transcription approach.

Reasons for Resistance to CAT

While an appreciable number of official federal reporters are now using CAT, they represent only a small proportion of all official federal reporters. Each reporter interviewed was asked to explain the reluctance of most federal reporters to using CAT, especially when compared to the explosive growth of CAT among freelance reporting firms.

According to the court reporters interviewed, most federal court reporters are discouraged about using CAT because of the

TABLE 7

COMPUTER-AIDED TRANSCRIPTION COSTS
FOR FEDERAL COURT REPORTERS

Comparative Costs

CAT More Expensive Than Other Transcription Methods	76%
CAT About Equal to Other Transcription Methods	12%
CAT Less Expensive Than Other Transcription Methods	2%
No Estimate Provided or Do Not Know	10%

Estimated CAT Costs

$ .60 or less	0%
$ .61 - $ .70	3%
$ .71 - $ .80	9%
$ .81 - $ .90	9%
$ .91 - $1.00	17%
$1.01 - $1.10	7%
$1.11 - $1.20	0%
$1.21 - $1.30	21%
$1.31 or greater	2%
No estimate provided	33%

need for substantial personal commitments in money and time (See table 8).

For many court reporters, particularly those not heavily involved in freelance reporting activities, the existing prices for CAT equipment and services remain unattractive. Most federal court reporters do not have sufficient financial stability nor transcript volume to commit to such an undertaking. For many court reporters, the traditional transcription methods provide sufficient earnings without risking financial sacrifices.

For most federal court reporters, the amount of training time and the changes required in steno writing styles are major barriers to adopting CAT technology. The more experienced and older court reporters have found that CAT often requires them to make substantial changes in their writing style. For almost all court reporters learning CAT, the extensive time commitments (many extra nights, weekends, and vacations) over an extended period of time (reporters estimate usually nine to twelve months) must be spent before becoming reasonably proficient on CAT.

Despite vendor claims, official court reporters must be willing to sacrifice time and money without any guarantee of productivity or financial gains. The mixed results to date among many federal court reporters who have used CAT reinforce this concern. For some undetermined number of reporters, their steno writing skills may not permit them to use CAT effectively.

CAT Reporters' Comments Regarding Federal Court Involvement in CAT

If CAT financing and training are, as reported, the major impediments for most federal court reporters starting CAT, should the federal judiciary participate in and subsidize government-sponsored CAT projects in the federal district courts?

The federal court reporters interviewed during this study overwhelmingly rejected--by a ratio of eight to one (See table 9)--any suggestion that the federal courts directly subsidize CAT and/or acquire CAT services for reporters. While most court reporters believe that CAT technology is the "wave of the future", they suggest, for a variety of reasons discussed below, that the federal judiciary should not make any major commitments to CAT technology at the present time.[10] These federal court reporters rejected--by a ratio of three to one (see table 10)--the assertion that CAT will eliminate the existing transcript delay problems within the federal courts. While CAT will reduce existing delays in transcript production for some reporters and under favorable circumstances, CAT will not eliminate transcript

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10. The interviews with the federal CAT reporters reveals a strong disinclination to encourage federal judicial administrative support and funding of CAT for use by federal court reporters. The purpose of this study is to report whatever viewpoints the survey revealed, rather than to evaluate them. A large proportion of the federal court reporters presently using CAT claim sole or shared ownership of a CAT system. It would be less than candid, however, not to acknowledge that some of their disinclination may be due, in part, to the fear of those reporters who have already invested their own money and time in CAT technology to have the federal judiciary subsidize similar investments for other federal reporters, thus providing at public expense what the existing CAT reporters attained by their own resources.

TABLE 8

REASONS FOR RESISTANCE TO CAT AMONG FEDERAL COURT REPORTERS

Substantial financial investment and costly to maintain and support; uncertainty of economic viability	60%
For many experienced reporters CAT will require substantial changes in writing style	50%
Substantial extra time commitment particularly during initial year; too much extra effort for minimal return	24%
Preference for existing manual system; retain adequate supply of qualified support personnel; good manual transcription operation	14%
Doubtful whether most court reporters have proper stenotype writing skills for CAT	12%
Fear technological innovation and automation	10%
Strong psychological barrier; lack incentives; no proper motivation	9%
Primarily for freelance reporters	9%

TABLE 9

VIEWPOINTS OF CAT COURT REPORTERS
TOWARDS FEDERAL COURT INVOLVEMENT IN CAT

Should the federal courts subsidize CAT and/or provide CAT services?

Yes	9%
No	76%
Unsure	15%

Reasons against direct court involvement:

Court reporters must have personal incentive; reporters need proprietary ownership.

Court involvement will be disruptive, uneconomical, disastrous for both the federal judiciary and most federal court reporters.

Federal judiciary will primarily help to subsidize CAT manufacturers, not the individual federal court reporter.

Government will waste substantial dollars; neither the Administrative Office nor district clerks' offices have sufficient technical or administrative knowledge or skills about transcript preparation or computer-aided transcription.

Several state court CAT projects over the past five years have required substantial financial government subsidies to support CAT.

TABLE 9 (continued)

Suggested Alternatives

Provide educational programs to court reporters and judges, particularly through regional (not national) seminars; emphasize presentations by working CAT court reporters, not vendor presentations; provide judges with more realistic and accurate assessment of CAT; provide reporters with "hands-on" experience.

Help federal court reporters obtain Small Business Administration loans for CAT systems.

Permit the installation of CAT systems within court facilities and provide permanent courthouse space and electrical services for the installation of CAT system by official reporters (several district courts have already established such policies).

Revise various administrative procedures concerning federal court reporter services; particularly, establish reporter pooling and rotation procedures in multi-judge jursidictions and for lengthy trials; establish more realistic but firm transcript deadlines; establish financial incentives or disincentives (penalities or sanctions) related directly to transcript delivery deadlines.

Charge differential transcript rates for CAT transcripts, and timeliness of transcript submissions.

Increase transcript page rates (closer parity to freelance rates).

Suggest future CAT reporters either purchase their own equipment or join local CAT service bureau which are operated by official court reporters or freelance reporters already involved in CAT.

TABLE 1Ø

COMMENTS CONCERNING THE ELIMINATION OF TRANSCRIPT DELAYS BY ADOPTING CAT TECHNOLOGY

Will CAT eliminate reporter's difficulties meeting the existing thirty-day transcription deadline?

Yes	22%
No	62%
Unsure or Don't Know	16%

Reasons for Agreement

Helps eliminate almost all transcript delay problems

Emphasis should be on criminal cases

Suggest change to forty- or forty-five-day rule across the board, but then with specific sanctions

Also requires better litigant notification system which provides better and quicker notices to the reporter

Reasons for Disagreement

Most delinquent reporters will remain delinquent

CAT is not a miracle remedy, just another tool; tend to only slightly reduce transcript delays

Unrealistic for court reporters with heavy courtroom schedule--even with CAT

CAT will not relieve court reporter of involvement in transcript preparation; shifts the type of work, not the reporter involvement

For lengthier trials (more than fifteen days), very difficult to meet existing deadline--even with CAT

For reporters who share a CAT system, sometimes a scheduling nightmare

Some administrative reforms should be higher priority than CAT; several other procedural remedies should be instituted such as pooling, enforcement of time limits

delays for most federal court reporters. As several reporters commented, CAT is a tool to help the court reporter, but is not a panacea to resolve transcript delay problems. Even if CAT were available for every federal court reporter, existing procedural policies, workload demands, and problems introduced by use of CAT technology would exacerbate transcript production problems within the federal judiciary. These problems include the logistics related to sharing CAT services or technology, required changes in court reporter stenotype styles and work habits, increasing volume of pretrial and trial proceedings, lengthier and more complicated judicial proceedings, and inequitable distribution of court reporter workloads.

These same court reporters reject the suggestion--by a ratio of two to one (See table 11)--that standards be promulgated to require new federal reporters to be proficient on CAT. If the federal courts were to establish and maintain CAT systems, additional court reporter hiring and performance standards that require CAT competency probably would be necessary. However, stenotype reporters who have CAT competency are not necessarily qualified for official federal court reporter positions. While they believe that an increasing number of recent graduates from stenotype schools are taught CAT stenotype theory, these recent graduates have insufficient experience and qualifications to be a federal court reporter. On the other hand, only a small percentage of reporters currently qualified for federal court reporter jobs have CAT proficiency.

TABLE 11

COMMENTS REGARDING COURT REPORTER SELECTION STANDARDS

In the near future, should new federal court reporters be required to demonstrate CAT proficiency before being hired as full-time official reporters?

Yes	33%
No	60%
Unsure	7%

Proponents of CAT Selection Standards

Large proportion of recent stenotype graduates are CAT compatible or CAT proficient; however, such recent graduates lack reporting experience

Good idea in long run; establish selection policy two to four years from now

Every qualified official reporter is basically CAT compatible

Opponents of CAT Selection Standards

Many competent reporters with excellent experience do not need to change to CAT in order to be proficient and efficient in transcript preparation

Will eliminate most qualified applicants

Ultimate objective is not to hire CAT reporters; instead it should be to enforce transcript deadlines irrespective of transcript method employed

CAT competency is not equivalent to federal court reporter competency

Federal official work much more demanding and sophisticated than most state official or freelance reporting work

Most federal court reporters are potentially CAT compatible, therefore unnecessary to formally evaluate proficiency

Therefore, many federal reporters argue that any court policy in the next few years that requires CAT proficiency would probably severely disrupt federal court reporting services and diminish the quality of reporting services provided to the federal courts. In addition, many federal court reporters are capable of meeting transcript commitments without using sophisticated CAT technology. As several court reporters commented, the "good" responsive court reporter who converts to CAT becomes more proficient and efficient; the "poor," less responsive court reporter adopting CAT will fall even further behind in transcript delivery and become more frustrated.

Many court reporters are concerned about altering the existing federal court reporter's responsibilities and compensation. Most reporters believe that the existing transcript fee structure, with modest increases in transcript rates, and incentives, if properly administered by the judiciary, will insure a high-quality transcript produced in a timely manner.

Transcript Fees and CAT Costs

One of the most complex and sensitive issues pertaining to federal court reporters is the charging of transcript fees. The existing federal court compensation policies support the assertion that the reporter's base salary covers only the taking of a verbatim record during court proceedings, and additional compensation is required for the reporter's production of an official record of his or her stenonotes. If CAT services or equipment

were provided by the court, many reporters are concerned about the implications concerning transcript fee structure, control of the transcription process, and the proprietary ownership of the official record. If reporters are held legally responsible for producing the official court record, court reporters believe they must have appropriate incentives to ensure the production of accurate transcripts within reasonable time limits.

Various state and local court jurisdictions have sponsored and operated CAT systems within the past five years. Most of these government-sponsored CAT projects have not adequately achieved desired goals. These court-operated CAT systems have required courts to spend substantial amounts of money with limited gains. The freelance reporting firms have done a better job than the state courts in producing cost-beneficial results on CAT through efficient management.[11] Given the greater demands and complexity of federal court reporting duties, the federal court reporters fear that direct government-sponsored CAT projects will probably be very disruptive and uneconomical for both the federal courts and federal court reporters.

Alternatives to Court-Sponsorship of CAT

The federal court reporters interviewed did suggest various alternatives to government-sponsored or government-supported CAT projects. They recommended that:

1. the federal judiciary should support those federal court reporters who voluntarily adopt CAT technology

11. See note 8 supra

2. educational institutions such as the Federal Judicial Center should continue to educate both judges and court reporters in CAT technology

3. CAT training programs should emphasize regional hands-on sessions, not just "pre-packaged" vendor presentations.

Some reporters mentioned that the fundamental purposes of court reporting services need to be emphasized:

> "To provide for the recording of all court proceedings where required by law, rule, or sound policy, without delaying the proceeding, and to assure the production of an accurate transcript or reproduction of that record, if required, within the shortest feasible time limits and at the lowest reasonable cost."[12]

In too many situations, existing court reporter policies and rules are inadequately enforced by administrative personnel. Most reporters feel that the majority of federal court reporters are responsive to the transcript demands of the court and litigants. Some reporters believe that the court may improve performance by initiating tighter enforcement or better supervisory control over delinquent reporters.

Several specific suggestions regarding administrative and procedural changes in court reporting services were suggested by various reporters interviewed:

1. restructuring transcript fee incentives and disincentives tied to the timely delivery of official transcripts; e.g., descending fee structure for late delivery of transcripts, increasing page rates for daily or

12. See Management of Court Reporting Services, note 4 supra. This booklet discusses recognized court reporting problems and describes ways in which courts may improve court reporting services and productivity through better management and control of court reporting resources. The report stresses the need to recognize that transcript delays may be avoidable or controllable through administrative and procedural reforms, including concise and enforceable court reporting standards.

expedited transcript requests, and sanctions for tardy delivery of transcripts.

2. tighter judicial control over the monitoring of transcript requests.

3. adoption of the pool or rotation approach to reporter assignments; reporters are not permanently assigned to a particular judge, but are assigned on the basis of court-related work demands.

A substantial number of court reporters suggest that the court give serious consideration to the pooling of federal court reporters, particularly in the larger multi-judge district courts. The federal court reporters in the Southern District of New York, one of the best organized, productive, and responsive federal court reporter groups in the country, have participated in a pool arrangement for many years and in CAT for several years. The primary use of CAT in the Southern District of New York is the production of daily or expedited transcripts. These reporters commented that pooling, not the adoption of CAT, is the single most import asset in meeting their responsibilities.

Ninth Circuit Court Reporter Perspectives on CAT

Since the Ninth Circuit contains the largest number of federal court reporters who have used CAT, it is of interest to discuss the impact of CAT in this circuit. Fifteen of the sixty federal reporters who used CAT in 1980 reside in the Ninth Circuit, specifically in four West Coast metropolitan cities.

The court reporters presently using CAT in the Ninth Circuit generally share the same expectations and apprehensions about CAT as federal reporters in the rest of the country. In some respects, however, the viewpoints of reporters in the Ninth Circuit are in greater agreement about existing CAT systems and services than their counterparts in other circuits. These Ninth Circuit reporters expressed almost unanimous agreement about several substantive policies and programmatic issues concerning CAT technology:

1. there are higher transcript production costs for using CAT;
2. they intend to continue using CAT;
3. CAT will not eliminate transcript delays;
4. CAT hiring standards should not be promulgated by the federal judiciary at this time; and
5. substantial and prolonged training for CAT reporters, including "reporter dictionary building," is required for most reporters.

They were unanimous in their viewpoint that the federal judiciary should neither finance nor become directly involved in CAT.

Several Ninth Circuit reporters made detailed suggestions for administrative and procedural changes in court reporting services. Some reporters advocated changes requiring better utilization of reporter manpower by means of pooling and rotation of court reporters within a particular district court; some reporters suggested limitations on the number of consecutive trial days a reporter should record trial court proceedings, and limitations on anticipated transcript backlogs permitted for each official court reporter.

Most reporters supported the proposed rule and procedural revisions on court reporting and transcript production in the United States Court of Appeals for the Ninth Circuit.[13] Some reporters felt that while these rules were more realistic than the existing Judicial Conference rule for the production of transcripts within thirty days, some of the proposed rule changes may tend to reward the inefficient court reporter and provide no appropriate incentive or recognition for the CAT court reporters.

The Ninth Circuit is also noteworthy in that several federal court reporters have recently terminated their participation in a CAT system (two reporters in the Central District of California and three reporters in the District of Oregon). They stopped their participation for a variety of economic, training, and personal reasons. While all these reporters expressed interest in pursuing CAT further if certain economic and technical

13. Memorandum issued by Clerk, United States Court of Appeals for the Ninth Circuit, (Nov. 17, 1980.)

conditions changed, most felt misled by CAT vendors or CAT service organizations concerning training time, required changes in reporter writing style, transcript costs, and logistical problems.

Several Ninth Circuit reporters commented that some CAT manufacturers' presentations and advertisements made to judicial and administrative bodies may raise unrealistic expectations regarding CAT technology.

A review of various articles and reports on CAT technology published in the past few years shows, at times, conflicting and confusing analysis about this technology. For example, substantial differences have been reported concerning the cost, cost effectiveness, and time savings of CAT.

A major CAT manufacturer has consistently claimed that current CAT transcription costs are $.20 to $.50 per page. The president of the National Shorthand Reporters' Association, who uses this vendor's CAT system, states that the cost per page claimed by this CAT manufacturer is in reality the contract charge alone, to which must be added other costs, such as supplies and support personnel. The state court-operated CAT systems for which case studies have been reported by National Center for State Courts, shows estimated CAT costs to range from $.85 to $2.85 per page. CAT transcription costs reported by federal court reporters range from $.65 to $2.25 per page.

Several CAT vendors extol the economic competitiveness of CAT compared to traditional transcription methods and the existing cost effectiveness of this technology for court use.

However, a recent National Center for State Courts report states that "unfortunately, only one of the eleven (state) courts presently using a CAT system has been able to achieve cost-effective operations".[14] As previously discussed in this report, most federal court reporters presently using CAT find that its costs remain substantially higher than other transcription methods.

The headlines and articles in several journal articles on CAT suggest that CAT has provided substantially speedier subsmission of the trial record. However, CAT's ability to reduce and eliminate transcript delay has not been consistently demonstrated for most court reporters in state and federal courts. The National Center for State Courts explains that "some official court reporters using CAT systems can produce transcripts in a more expeditious manner than non-CAT reporters in the same court. However, some of the non-CAT reporters have equally good records for timely production of transcripts."[15] The federal court reporters interviewed for this study support this conclusion. Both this study and the National Center for State Court studies conclude that the time savings using CAT clearly relate to the ability, motivation, and management of court reporters rather than to the transcription method employed by the reporter.

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14. See CAT Analysis Project Staff, supra note 7 at 15.

15. Id. at 17.

Conclusion

There is not yet a clear picture of the future role and effectiveness of CAT in the federal courts. CAT has some recognized benefits. However, in light of the information obtained from this report, a more rigorous analysis of CAT capabilities and other court reporting methods available to the federal courts needs to be performed before any decision is made regarding federal financial support or government-sponsored projects of CAT in the district courts.

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