C4-89-2099

THE MINNESOTA COURT OF APPEALS
MINNESOTA JUDICIAL CENTER
25 CONSTITUTION AVENUE
ST. PAUL, MINNESOTA 55155

January 30, 1992

CHAMBERS OF
HONORABLE ROGER M. KLAPHAKE
JUDGE

(612) 297-1026

Sue K. Dosal
State Court Administrator
Minnesota Judicial Center
St. Paul, Minnesota

RE: Video\CIC Evaluation Report

Dear Ms. Dosal:

As Chair of the Video\CIC Evaluation Committee, I am pleased to transmit to you the final report of the Committee. Since its formation in 1990, the Committee has overseen the development of a research plan and the creation of a research design. The Committee has met three times in the last twelve weeks to review all relevant data, to develop specific findings and to propose recommendations on future use of videotape record-making and the Computer-Integrated Courtroom.

The Evaluation Committee had extended discussions concerning the research design in the Fall of 1990 and early Winter of 1991. The Committee agreed that it should follow the general design of the National Center for State Courts' evaluation of video courtrooms. The NCSC's study did not attempt to make direct comparisons between video recording and other court reporting methods; thus it did not design a study that randomly assigned cases to video or traditional courtrooms, nor did it survey attorneys who did not appear in a video courtroom.

One member of the Committee strongly disagrees with the research design of our study, in effect arguing for a more controlled study that would directly compare court reporting methods. Though the Committee respects this perspective, it was in agreement that our evaluation must be based on the experiences and perceptions of those attorneys, judges and court personnel who either worked in a video courtroom or who used a videotape record on appeal. We believe the tabulations and statistical analysis derived from the responses of trial and appellate attorneys gave us a clear reading on how video technology was received during the pilot project. Likewise, the insights we received from judges and court personnel through personal interviews have been very helpful.

As for the CIC project, the Committee concluded that it did not have enough data to make anything more than a recommendation to continue the project. This recommendation is made in the hope that more interest will be shown by the local bar in the CIC concept and that complex litigation will be tried in the courtroom using the computer retrieval technology available at the attorney's fingertips.

If you have any further questions about the report, please let me know. I would be pleased to present the Committee's recommendations to the Supreme Court if the Chief Justice would so request.

Sincerely,

Roger M. Klaphake
Appellate Court Judge

C4-89-2099

VIDEO RECORDING AND THE COMPUTER-INTEGRATED COURTROOM:

AN EVALUATION OF TWO COURT REPORTING TECHNOLOGIES

BY

VIDEO\CIC EVALUATION COMMITTEE

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Chapter 1. Introduction

In 1989, the Minnesota legislature appropriated funds for two court reporting pilot projects. It funded the installation of video recording systems in three Minnesota trial courtrooms and the Court of Appeals and the installation of a Computer-Integrated Courtroom (CIC) in the Second Judicial District (Ramsey County). [1989 Laws of Minnesota, Chapter 335, Article 1, subdivision 5.]

The legislature, in 1988, had directed the State Court Administrator to study and report to it the costs and benefits to litigants of the use of video or audio tape recording of civil litigation and administrative hearings instead of stenotype and transcription recordings of these proceedings. [1988 Laws of Minnesota, Chapter 686, Article 1, Section 3] In response, the State Court Administrator appointed a Court Record Study Committee comprised of judges, court administrators and court reporters. The Committee worked with the National Center for State Courts to undertake a national literature search and analysis of evaluations of alternative court reporting technologies which had been completed in other jurisdictions.

A two-volume "Report of the Court Record Study Committee on Court Reporting Technologies" was issued on February 3, 1989. The report reviewed stenograph machine, electronic (audio) recording, video recording, computer-assisted transcription (CAT) and the Computer-Integrated Courtroom in 21 jurisdictions. The Committee concluded that no one technology was "clearly superior in all circumstances and environments." Nevertheless the

Committee believed that technological advancements held promise "for more expeditious and less costly production of the court record and warrant continuing examination." It recommended the legislature fund a pilot project using video recording and another pilot using the CIC concept, the two technologies that had not been used in Minnesota. In response the legislature funded the three video pilot sites ($204,000) and the CIC ($32,000).

The Supreme Court established the video record pilot project in an order filed on November 17, 1989. Courtrooms in St. Peter (Nicollet County), Rochester (Olmsted County) and Moorhead (Clay County) were selected as video record sites. The order also set out special court rules for the project that included prohibitions on the use of video recordings by the news media and the use of the video record on appeal. The Court of Appeals was authorized to use the videotape of the trial proceedings as the record. A litigant could provide up to 50 pages of printed transcript as a supplemental record, but the video was defined as the official record. If, however, a "video appeal" reached the Supreme Court, the appellant was required to prepare a printed transcript of the entire trial proceedings. Finally, the court directed the State Court Administrator to prepare an evaluation of the video and CIC pilot projects.

An Evaluation Committee was then appointed by the Supreme Court. The Committee, chaired by Judge Roger Klaphake of the Court of Appeals, represented a cross-section of the judicial system: judges, court administrators, court reporters and recorders, and an attorney from the Office of the State Public Defender. Several members of the Evaluation Committee had served on the Court Records Study Committee. The Committee was directed to conduct an evaluation of the video and CIC pilot projects and submit a final report to the State Court Administrator by January 1, 1992.

Chapter 2. Video Pilot Project Description

The video pilot program was implemented in August, 1990. Jefferson Audio Visual (JAVS) of Louisville, Kentucky, the leading vendor of courtroom video recording equipment installed the systems in St. Peter, Rochester and Moorhead and conducted an orientation for court personnel. The basic system, which cost approximately $62,000 per site, included five fixed color cameras, ten microphones, five Hi-Fi video recorders, an audio-video switching system, 600 blank tapes and one year of free maintenance. One of the cameras was located in a judge's chambers, while the others were fixed on the judge, the witness box, and the counsel tables. The juror box was not covered by a camera, as the Supreme Court order prohibited coverage of jurors.

When court was to go into session, a court employee loaded two blank videotapes into the recorders and turned the system on when the judge entered the courtroom. A court employee sat in the courtroom and kept a log of the proceedings, noting the times when significant activities took place. The cameras were directed by the automated switching system: the system would switch on a camera according to who was speaking at the time. Mute buttons were installed on the bench and counsel table, which allowed off-the-record conferences. Throughout the court session, the video recorders were stamping the date and time on the video tape. At the close of court each day, the tapes were stored in the court administrator's office. The next day, two new tapes were loaded into the recorders. Since two additional video recorders were installed in the system for simultaneous recording, attorneys had the opportunity

to bring a blank tape into court to obtain a record immediately.

There were variations in the three sites. In St. Peter, with one sitting judge, the courtroom was used for all court proceedings. In Rochester, three judges used the courtroom for primarily contested matters. In Moorhead, three judges used the courtroom on a regular basis for a full range of proceedings.

If a case was appealed, the court administrator forwarded one copy of the tape to the Clerk of Appellate Courts. Upon receipt, the Clerk of Appellate Courts sent a notice to the parties informing them that the transcript was deemed complete for the purposes of Rule 131.01 of the Rules of Civil Appellate Procedure. Under this rule, the appellant's brief was due in thirty days from the date of the notice. When the case was assigned to a three-judge panel, the tape was provided to the assigned law clerk, who reviewed the tape using a JAV videorecorder that could play back the tape at twice the normal speed. This "2X" system used digital signal processing to alter the audio track; a person's speech was faster and higher pitched.

Chapter 3. Evaluation Research Design

The Committee determined that several key issues needed to be evaluated during the pilot project period. These included the quality of the taped records (audio and video), the reliability of the system, the time spent in and out of the courtroom using taped records and the effects, if any, that videotaping has on the trial and appellate processes.

The Committee agreed that it was important to base the evaluation on the users of the video systems. Therefore trial and appellate attorneys, trial and appellate judges, appellate law

clerks, and trial court personnel needed to be surveyed about their experiences in the video courtrooms and with using videotape record for review.

Methodology

The evaluation was concerned with assessing the efficacy of the videotape technology for improving trial court and appellate court operations. The evaluation design was based on a recently completed study of video courtrooms by the National Center for State Courts (NCSC). [*Videotaped Trial Record: Evaluation and Guide* by William E. Hewitt. 1990] Strictly speaking, the Minnesota evaluation was not designed as a comparison between video recording technology and modes of court reporting. The NCSC study was not designed as such either, although comparisons were made between people's perceptions of the two methods of making the record. Cases were not randomly assigned to video or traditional courtrooms nor were lawyers appearing in traditional courtrooms surveyed. The Minnesota evaluation followed the same course, confining itself to a survey of all attorneys who appeared in the video courtrooms or took an appeal with a video record. Attorneys were asked about their experiences and their perceptions with videotaped records. The responses were tabulated and statistically analyzed. In addition, judges and court personnel at the trial and appellate levels who worked with the videotape technology were interviewed about their experiences and perceptions.

Data Collection

Cases were tracked by court personnel using the daily court log. The log contained the case title, number, the names of attorneys and their license number. These logs were copied and forwarded monthly to the Research and Planning Office of the State Court Administrator. Using this information, a database was compiled for the three locations. A questionnaire was

sent probing the background of the attorney, the attorney's experience with court reporting and transcripts, reactions to the video equipment, the dependability, reliability and faithfulness of different court reporting methods, the attorney's preferences, and the usefulness of video for other non-record-making purposes.

The attorneys were surveyed in April, 1991 using the "total design method." One week after the first mailing, a reminder postcard was mailed. After another two weeks, an additional questionnaire and cover letter were mailed. The overall response of the first survey was excellent: a 90% response rate was attained.

A second round of surveys was sent in October, 1991 to 211 trial attorneys who had appeared in the courtrooms since April. The response rate was not as good as the first: 76% returned their questionnaire. A number of attorneys who had been previously surveyed did not respond a second time.

Attorneys who participated in an appeal to the Court of Appeals using the video record were also surveyed by questionnaire. Names and addresses were accessed using the Appellate TCIS system. The questionnaire was structured like the trial attorney questionnaire, with additional questions on how the attorney used the video record in preparing the appeal. The questionnaire was mailed in November, 1991. An 83% response rate was attained by mid-December.

In addition to the questionnaires, staff to the Committee interviewed judges and court personnel at the three courtroom sites in October, 1991. They were asked about day-to-day workings of the equipment, its reliability and faithfulness in making the record, its effect, if any, on the trial process, their conclusions about the method and their thoughts about expanded use

of video record-making.

Staff also interviewed the Court of Appeals law clerks in November, 1991 about their use of the video record in preparing a bench memo for a three-judge panel. Court of Appeals judges were also interviewed in December, 1991 and early January, 1992 about their experiences with using the video record and their preferences for either a videotape or printed transcript.

Chapter 4. Findings and Recommendations: Video Courtrooms

Based on an analysis of the data collected from attorneys, judges and court personnel, the Committee developed a series of findings and recommendations. In the pages that follow, a set of findings leads to a specific recommendation. Though recommendations are individually numbered, the Committee wishes to make clear that the report should be read as a whole. Unless otherwise noted, the statistics and tables on trial attorneys referred to are from the second round of surveys.

Attorneys at the three pilot sites went into the project with open minds: 60% were neutral, with 20% skeptical and 20% enthusiastic. **Figure 1.**

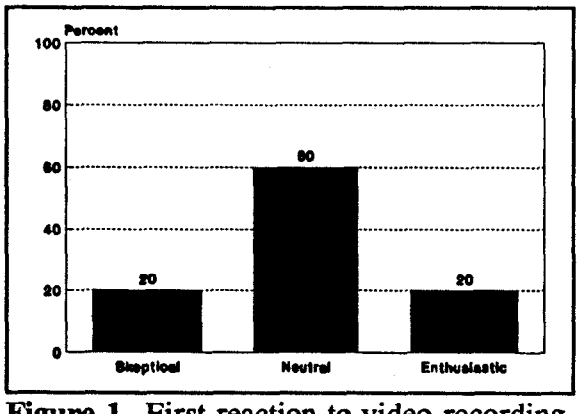

Figure 1 First reaction to video recording when introduced.

Judges and most court personnel also stated they were open-minded or mildly optimistic about the project. Stenographic reporters were skeptical about the worth of video recording from the beginning.

Findings

1. Video recording produces a faithful record of court proceedings.

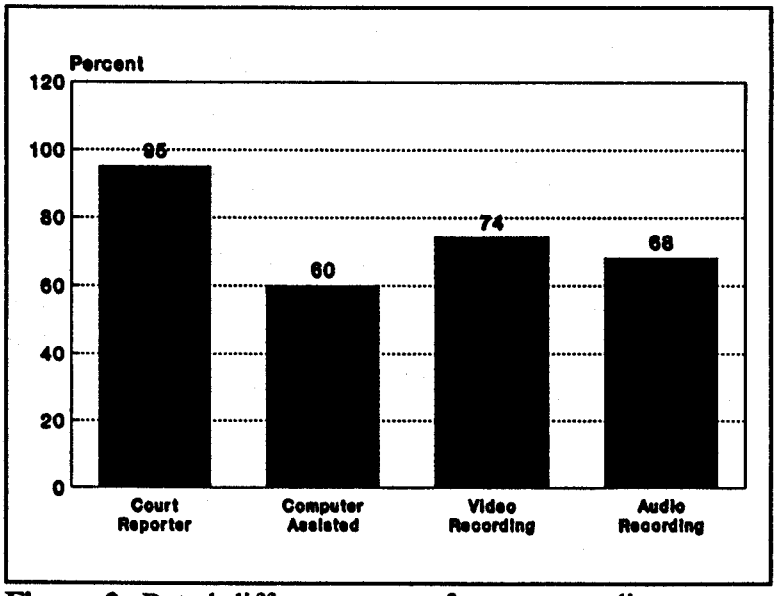

Figure 2 Rated different types of court recording as faithful.

Attorneys, judges and court personnel were in general agreement that video produces a faithful record, i.e., a genuine rendering of the events of the proceeding. Trial attorneys were asked to rate the faithfulness of different court reporting methods. For stenographic reporting, 95% rated the transcription very or somewhat faithful, with only 3% reporting no basis to answer. For video recording, 74% rated the recording very or somewhat faithful, with 23% reporting no basis to answer. **Figure 2.**

The faithfulness of video recording rated higher with appellate attorneys: 84% found the recording very or somewhat faithful, compared to 90% for printed transcripts. **Figure 3.** The law clerks with the Court of Appeals who reviewed the tape records were unanimous in concluding that the video was a faithful record.

At the trial level, most judges, court reporters, court recorders and court clerks believed

that video produced a faithful record. Several persons, however, reported problems with non-verbal responses by witnesses. The camera would not switch to the witness to record a nod or head movement because sound was needed to trigger the camera. In addition, when two persons talked at the same time, the camera only fixed on one individual, making it difficult at times to understand what was being said. A final concern was the prohibition against filming potential jurors during *voir dire*. Identification of persons was more difficult because only voices were recorded.

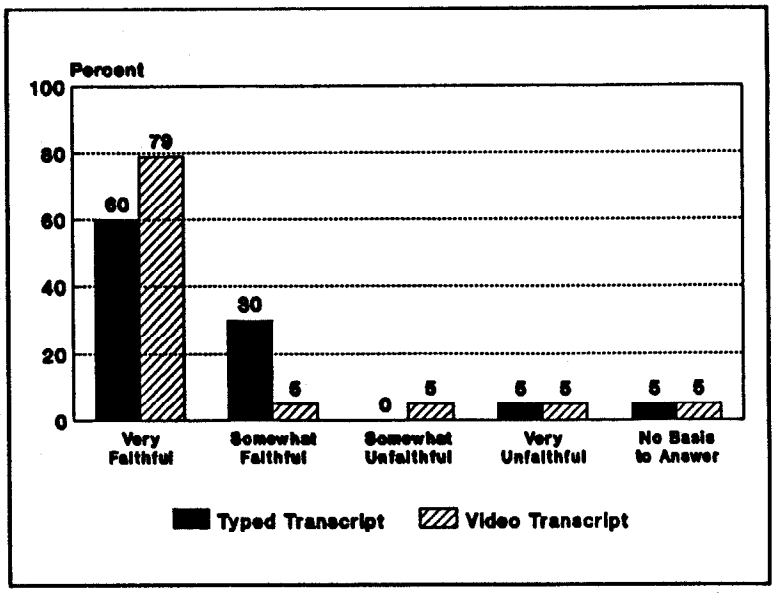

Figure 3 Rated faithfulness of typed transcript and video tape.

2. Video recording is a dependable method of making the court record.

The dependability of the video equipment was highly rated by most of those surveyed. Dependability refers to the ability of a person or a mechanical device to make the record on a regular basis. Of the trial court attorneys responding to the second survey, 76% answered that video was very or somewhat dependable, which was 14% higher than the first survey. Those responding with no basis to answer dropped from 31% on the first survey to 20% on the second. These and other findings reflect a general trend to more positive views of video as the project progressed. 95% of the attorneys rated stenographic court reporting very or somewhat dependable, with only 3% offering no basis to answer. Attorneys encountered very few

technical problems with the video system. **Figure 4.**

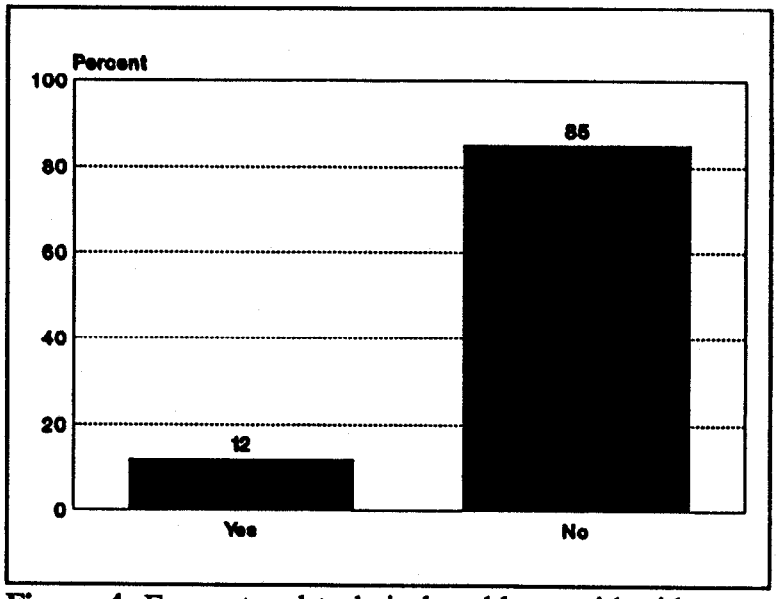

Figure 4 Encountered technical problems with video system.

Judges and court personnel were generally very positive about the technical aspects of the courtroom video recording. Aside from several minor problems, the equipment did not malfunction or break down. Insufficient training and poor written documentation did lead, however, to operator error in several instances. In one case, the audio signal was not recorded during a session in the judges's chambers.

3. Video recording is not intrusive to attorneys or participants.

As attorneys have used the video courtrooms longer, their views on intrusiveness have changed. In the first survey, 20% said video was intrusive to them; in the second survey, only 9% said it was intrusive. Attorneys also were unlikely to think that video was intrusive to others in the courtroom. **Figure 5.**

In the first survey 34% said it was intrusive to others (witnesses, jurors), while only 21% said it was so on the second survey. As noted above, the change in attitude is part of a larger trend that shows attorneys become more comfortable and positive about video recording the more times they appear in the courtroom.

Trial judges and trial court personnel agreed that video was not intrusive and did not

affect the trial process.

Recommendation 1

Video recording is an acceptable technology for making the court record.

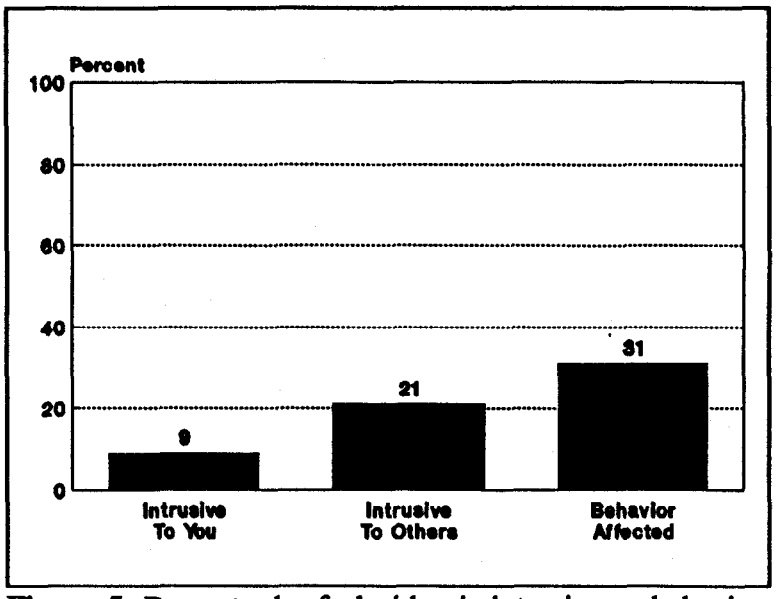

Figure 5 Percent who feel video is intrusive or behavior is affected by it.

Findings

4. **Reviewing videotaped court proceedings and transcribing a video record is a clumsy and time-consuming process.**

The first three findings reflect that video recording in the courtroom is an almost invisible process for most participants. The making of the record is video's greatest strength. Its greatest weakness, however, was apparent to anyone who had to review the tape or prepare a written transcript from the tape. Finding specific parts of testimony was difficult and time-consuming, while transcribing from the tape was clumsy and inefficient. These deficiencies are based on the design of the video recorder: finding or reviewing segments of the tape requires constant use of the transport controls.

At the trial level, few attorneys had occasion to review a video tape (27% in the first survey, 22% in the second). Trial judges and court personnel, however, did need to review or transcribe tapes and they raised the most objections to the process. The most common complaint

from judges was the difficulty in locating specific parts of a proceeding. Though a date-time stamp is placed on the tape, it took time and effort to find the exact spot because the court log only listed general events, such as direct examination of witness or introduction of an exhibit. After finding the general event, the judge still needed to jump around the tape until the pertinent segment was located. (Since the system was installed, JAVS has added enhanced indexing and search functions on its machines. These were not part of the pilot project. The Committee, however, concludes that even these enhancements would not reduce the time involved in locating parts of the proceeding of interest to the judge. These new enhancements cannot move the tape to specific lines or words.)

Trial court personnel who prepared transcripts found that it took two-to-three times longer to prepare printed transcripts from a videotape than from other methods. Several reasons were given for this: (1) The transcribing video recorder sold by JAVS did not provide the flexibility and ease of use that is found in an audio transcriber. The foot pedal, which engaged reverse, play and forward functions, worked adequately, but the mechanics of the video machine made switching directions very slow and inaccurate. To move backwards or forwards required engaging the stop button, followed by the forward or reverse button, followed by the stop button and finally the play button. In addition, the video recorder could not play back its audio track at a variable speed, which made transcription more time-consuming. (2) The audio tracking system on the video recorders was poor, compared to an audio transcriber. The video recorder had two-channel stereo, which mixed all microphone signals on the same tracks; tracks could not be isolated when "speak overs" occurred, making it more difficult to produce a transcript. In contrast, audio transcribers have four independent tape channels, with one microphone

allocated to each track to aid isolation of the signals and variable speed controls.

Court reporters had difficulty preparing a transcription directly from the videotape. One stenographic reporter called it "going back into the Dark Ages," while another typed the audio track into his CAT system and then edited the result. Electronic court recorders also found the transcription system below par and desired to return to their ECR machines as soon as possible.

Official reporters have serious objections to transcribing video tapes, as noted above. One alternative would be the referral of transcript requests from video to private transcription services. A high degree of specialization in video transcription would result in timely transcripts while relieving court employees of the burden of producing these documents.

It should be noted, however, that most of the printed transcriptions produced during the pilot involved sentencing transcripts. The transcripts are sent to the Department of Corrections to inform the department about the terms and conditions of the sentence and are used by some judges in cases involving probation. From interviews with participants and discussions within the Committee, it became clear that some judges around the state prepare sentencing orders, which when detailed may serve the same purpose as the transcript. The orders usually arrive with the prisoner, while

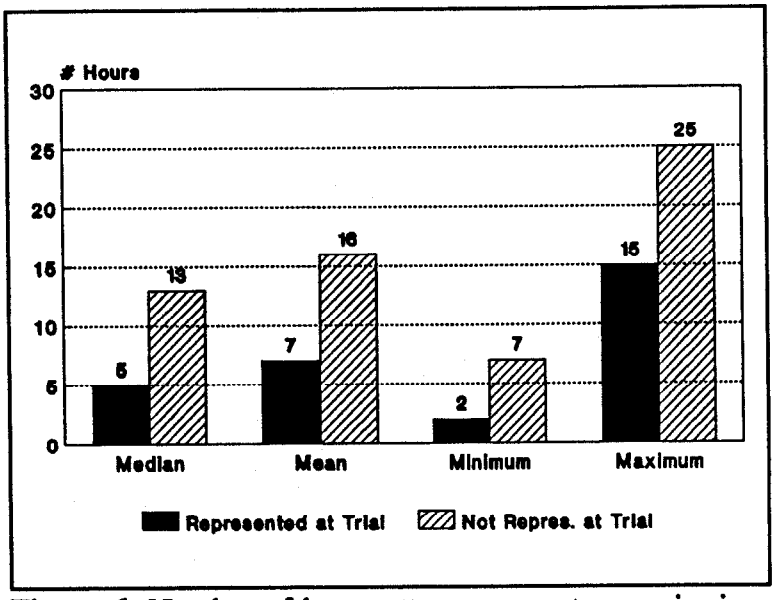

Figure 6 Number of hours attorneys spent on reviewing video.

some transcripts may take weeks or months to prepare. Whether sentencing transcripts should be discontinued was outside the direct charge of the Committee.

At the appellate level, attorneys and Court of Appeal law clerks found the review process extremely time-consuming Appellate attorneys, 40% of whom represented their client at trial, spent more time reviewing the tape than they would have reviewing a printed transcript. The median time for reviewing a taped record was 11 hours, while the median for the printed transcript was 4 hours. **Figure 6.**

Broken down further, review time was much longer for attorneys who had not represented their client at trial: the median time for attorneys who had represented their client at trial was 5 hours; for those that had not represented the client at trial the median time was 13 hours. Law clerks reported taking 2-3 times longer reviewing a videotape. **Figure 7.**

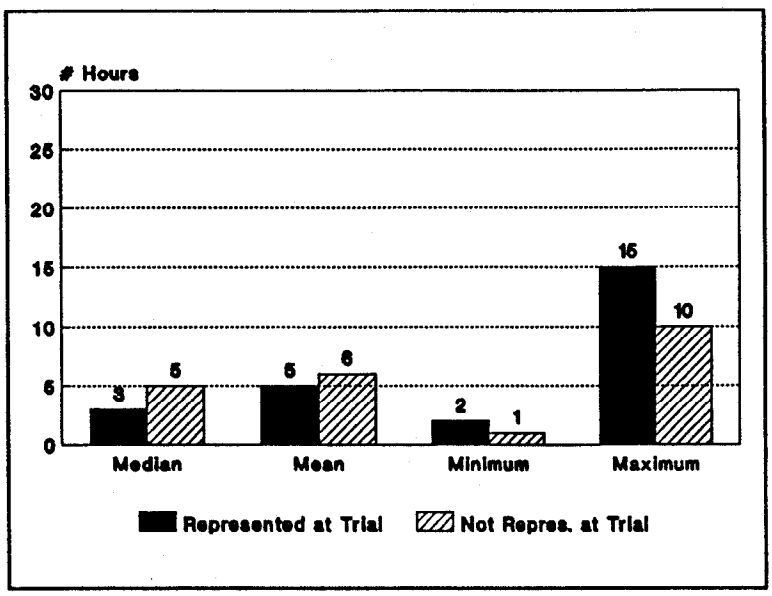

Figure 7 Number of hours attorneys spent on reviewing typed transcripts.

Attorneys and clerks objected to the real time tyranny of video tapes: a six-hour tape takes six hours to review, which is reflected in high negative ratings by attorneys. Again, appellate attorneys who did not represent their client at trial had stronger negative attitudes. **Figure 8.**

No one interviewed found the double-speed video recorder an effective tool; the words went by too quickly, forcing constant rewinding. Every clerk abandoned the feature as unworkable. In contrast, a printed transcript can be skimmed and notes taken in much less time.

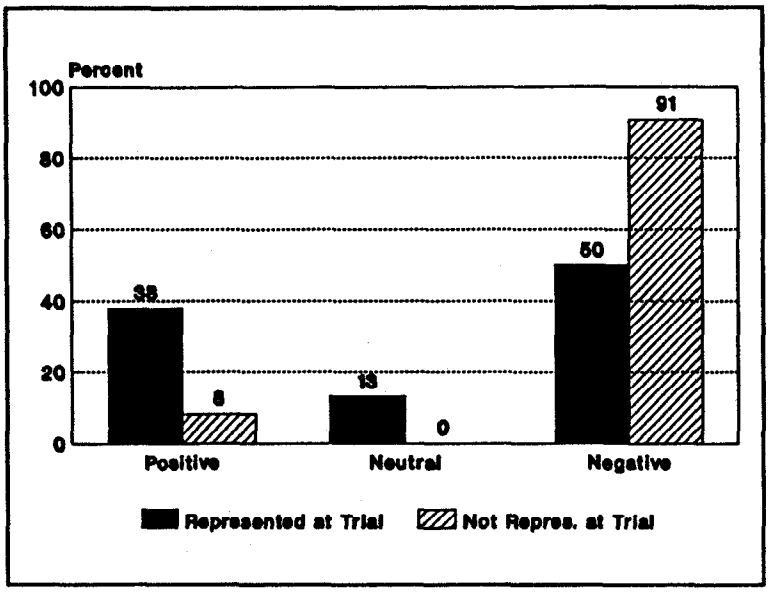

Figure 8 Overall attitude of video recording.

One law clerk commented that "you can't Post-it Note a videotape," referring to the common practice of marking a transcript's relevant parts. Other clerks found that they had to stop the tape frequently to write down or dictate verbatim portions of the record. Though several clerks found watching the tapes fascinating and "real," most concluded that a substantial increase in video appeals would slow down the system. They also noted the practice of appending selected parts of the printed transcript to the judicial bench memo; with video they could not do so.

5. Attorneys, appellate judges and appellate law clerks prefer the use of typed transcripts.

Appellate attorneys who did not represent their clients at trial overwhelmingly (83%) preferred printed transcripts compared to 57% for attorneys who appeared at trial. Appellate judges and clerks also preferred printed transcripts for the reasons noted in Finding 4. When asked if videotape increased their costs, 63% of the appellate attorneys said it did. **Figure 9.**

It should be noted that the novelty of the videotape review may have hurt productivity;

the use of video disturbed well-articulated work routines. Several appellate clerks thought they would do better handling the tapes if they had to do more of them.

In its research of the national scene, the Committee understood that the pilot project would follow the Kentucky model.

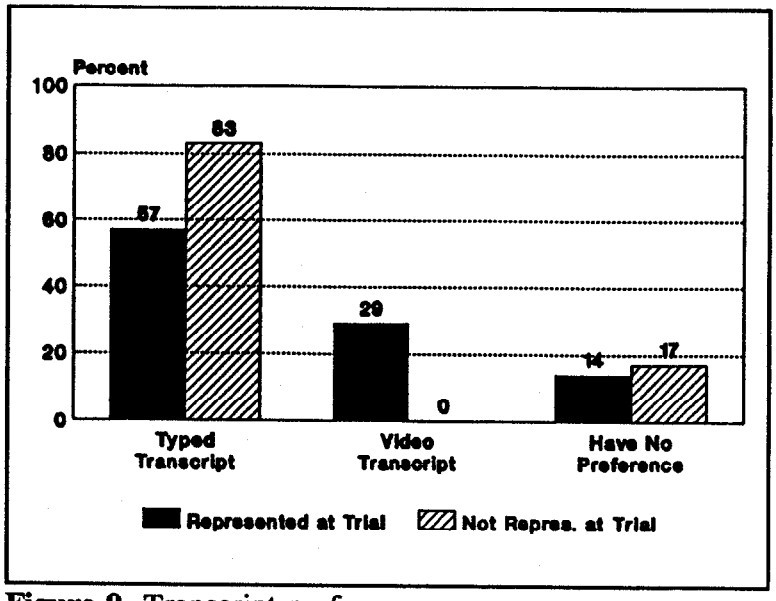

Figure 9 Transcript preference.

The other alternative in video records is the Michigan model. In Michigan, all video appeals are transcribed, the result of bench and bar wishing to preserve the typed record on appeal for the convenience of all participants. Given the alternative, Minnesota appellate court personnel opted for the Michigan model.

The Committee notes that the enthusiasm of Kentucky appellate judges for video review is explained, at least in part, by their court's standard of review. Kentucky places the burden on attorneys to raise all pertinent issues and cite the applicable record. On review, the law clerks and judges only look at the cited record in the briefs; neither judges nor clerks routinely review the entire record. This is in contrast with the procedures of the Minnesota Court of Appeals. Law clerks are expected to review the entire record, spot problems not cited or clearly articulated in the briefs and prepare their own statement of facts. This wholesale review of the record places a heavier burden on the appellate court.

Recommendation 2

Typed transcripts should be prepared for all cases appealed to the Court of Appeals or the Supreme Court.

Findings

6. **A videotape courtroom would be useful for court cases where the chance of appeal is unlikely.**

Several judges in the pilot sites expressed the idea that videotape would be ideal for court calendars where the chances of appeal are small. Because of the limitations on playback and transcription, video would serve primarily as an archival record.

7. **A videotape courtroom may have utility for more than making the court record.**

There appear to be other uses for a videotape courtroom than just making the record. Several judges noted that the system could accommodate the testimony of child witnesses in the judges' chamber, with the courtroom watching the proceedings on the television monitor. In addition, 87% of the attorneys believed review of the tape would improve their presentation, while 74% thought videotapes would help in preparing a witness.

The Committee also notes that the Supreme Court permits interactive video technology for the taking of medical testimony in *Price* and *Jarvis* hearings. It might be cost-effective for a videotape courtroom to be adapted to allow this type of two-way communication.

Recommendation 3

In light of recommendation 2, courts that elect to use video recording should consider its uses for cases less likely to be appealed or proceedings that would benefit from this technology.

Findings

8. Videotaping of court proceedings had a limited effect on reducing use of court personnel in the courtroom.

At the beginning of the pilot projects, it was assumed that the need for court personnel in the courtroom would be reduced. In Kentucky and other states that employ video recording, trial judges run the equipment and maintain the trial log, thus reducing personnel costs. Judges in the Minnesota pilots elected, however, to have a court employee (stenographic reporter, electronic recorder or court clerk) present in the courtroom to operate the machines and keep the log.

The potential for savings exists if (1) the judge chooses to operate the equipment and maintain the log in lieu of court personnel or, alternatively, (2) the official court reporter is not accompanied by the court clerk. The same potential for savings exists when Electronic Court Recording is employed.

9. Judges who previously used Electronic Court Recording technology preferred it over video.

Two of the judges in the pilot projects used ECR technology (audio recording) prior to the installation of the video recording system. At the conclusion of the project, both concluded

that they preferred ECR to video. The judges found the transcribing capabilities of the ECR machines superior to video tape. The cost of an ECR installation is also much less than video installation, while still providing a dependable and faithful record of the proceedings.

10. The court system may benefit from a creative mix of technology.

It is clear that the making of a stenographic record by means of a steno machine in cases where appeal is virtually nil is not a good use of this skill. Stenographic reporters are prone to carpel tunnel syndrome and other "overuse" injuries, which have resulted in substantial workers' compensation claims. They should be relieved of the high volume of note taking where an audio or video record could be made. If they operated the recording equipment, the court clerk would not need to be present.

RECOMMENDATION 4

The court system should study ways of better utilizing all court reporting resources and technologies.

Findings

11. Court record-making technology continues to evolve.

At present the use of videotape has serious limitations for reviewing and transcribing the record. It appears likely that over time these types of limitations will be removed by technological advancements. JAVS, the vendor and installer of the video systems, is constantly upgrading equipment and providing enhanced logging and review capabilities. Another company has developed a computer board that connects to a video recorder; this allows software to record

the tape counter number into the computer for a reference point. Searching for a specific segment is as simple as moving the computer cursor to the reference point. The computer then moves the videotape to the correct position and plays the recorded event.

Beyond these incremental improvements, the steady evolution of computers and digital storage devices points to rapid change in the recording and storage of information.
If video cameras and microphones sent their signals to a computer with a digital storage device rather than tape, the record could be accessed much like a person handles a word processing text today. An audio signal, if recorded to digital, could be slowed down or speeded up.

The integration of text, sound and video images in "multimedia" personal computers is just beginning. The research and development involved in producing multimedia applications will likely benefit court reporting technology. In addition, the development of voice-recognition software continues to go forward. With the trend of more powerful and affordable computers unlikely to change, voice-recognition software that accurately transcribes sounds into word no longer seems the stuff of science fiction.

RECOMMENDATION 5

The court system should continue to monitor and explore evolving court record-making technologies.

Chapter 5. Findings and Recommendations: The Computer-Integrated Courtroom

The Computer-Integrated Courtroom (CIC) was installed by Xscribe Corporation of San Diego, California in the Second Judicial District Courtroom of Judge Gordon Shumaker in mid-1990. The installation, which cost $32,000, consisted of four courtroom monitors (one for the judge, each counsel, and an extra monitor for hearing-impaired individuals or foreign interpreters), three keyboards, two computers and laser printer in the reporter's office, a local area network connection system for the computers and software to run the entire CIC, and one year of free maintenance. The Xscribe compatible real-time court reporter donated the use of his central processing unit, which was needed to complete the CIC operation and housed the reporter's personal transcription dictionary.

As Judge Shumaker's court reporter typed his notes into the computer, the computer translated in "real time," sending a transcription to the computer monitors. A computer keyboard was placed with each monitor located on the counsel table and the judge's bench, allowing each person to confidentially annotate the unfolding transcription, conduct searches of testimony, etc. At the end of a court session, a rough daily transcript could be printed off the laser printer in whole or in part.

In addition, parties had the opportunity to bring computer files to the CIC, where they could be loaded into the computer and then accessed during court. This "litigation support" feature was driven by proprietary software, which required attorneys to acquire the software in

advance and prepare compatible disk files. In a CIC, this would enable a civil litigator, for example, to access depositions, interrogatories, expert testimony, trial notes and outlines, etc, from the computer at counsel table.

During the pilot project several external factors came into play that limited the effectiveness of the pilot and the adequacy of the evaluation. At the beginning there were technical problems with courtroom wiring and with the proper setup of the software and hardware. Many of the court reporters did not have Xscribe compatible equipment, limiting the number of judges who could use the courtroom besides Judge Shumaker. In 1991, Judge Shumaker moved to another chamber, leaving the equipment behind. A hearing-impaired Attorney-General had requested the use of the CIC for her implied consent hearing beginning in July, 1991. Her unexpected medical surgery delayed this evaluation for an indefinite period of time. Xscribe contributed the use of a central processing unit for the remainder of the pilot project and numerous court reporters' personal transcription dictionaries were loaded into it. Another judge moved into the courtroom who was interested in using the CIC. The main computer malfunctioned in the Fall of 1991 and was returned to San Diego for repair. Judge Thomas Mott is now using the real time capabilities of the CIC.

Court administrators and court reporters in the Second District tried to generate interest in the courtroom. They publicized the installation through the newspaper, with the local bar, with various attorney associations, and offered CIC demonstrations to the legal community. A legal assistants' association conducted a continuing-education seminar featuring the CIC. Some fully-trained paralegals and legal assistants have expressed a willingness to donate their services to the CIC on a pro bono basis. Unfortunately, the litigation support features of the CIC have

never been used during the pilot period. The installation has only been used for real time review of the record by the judge.

A survey was designed for attorneys but was not distributed because the CIC was not used for complex litigation. Thus, the Evaluation Committee was hard pressed to "evaluate" the CIC.

Findings

The CIC is a state-of-the-art court reporting system designed to assist complex litigation. Due in part to shifts in room and judicial assignments, the system has not been used for this purpose. In addition, the courtroom could only be used by court reporters who had compatible equipment. The Second District court reporters are presently working with other vendors to insure that all CAT reporters get on-line. The system has the potential to enhance the quality of proceedings for the hearing-impaired and speed up the foreign interpretation for non-English speakers because real time transcription in English can be used directly by a hearing-impaired person, while a translator can use the screen to orally translate the testimony to the non-English speaker.

The CIC may become in time an effective reporting environment for complex litigation. Court administrators and judges will, however, have to aggressively promote the system to attorneys and legal assistants. The new General Rules of Practice for the District Courts mandate early intervention by the courts once a case is filed. This presents an opportunity for administrators to notify and educate law firms about the CIC in cases that are identified as complex. Firms will have to make a financial commitment through the purchase of software, the training of their attorneys and legal assistants on the use of the litigation support features,

and the setup of a computer file before trial and its expansion and maintenance throughout the trial. Although many attorneys are computer-literate, ideally legal assistants would assist the trial attorneys in the CIC pretrial and trial litigation-support operation.

If the CIC is not adopted by law firms, however, the "litigation support" features will never be fully used. The use of real time access to transcriptions may assist a judge or attorneys in making trial notes but it is less cost effective than a legal pad or a laptop computer. The CIC makes little sense if its most sophisticated features are not used on a regular basis.

Recommendation 1

The Computer-Integrated Courtroom should be allowed to continue in the Second District.

The CIC pilot project should be allowed to continue in the Second District because more time is needed to see if its "litigation support" features will be used by the bar.

Recommendation 2

No other Computer-Integrated Courtrooms should be installed at this time.

Because of the high cost of installing a CIC and the lack of a demonstrated need for complex litigation support in the courtroom, no other installations are recommended at this time. Though current CIC design now emphasizes portability rather than fixed systems through the use of laptop computers, it remains to be seen if there is enough demand to justify this reporting technology.

Recommendation 3

The Computer-Integrated Courtroom in the Second District should be evaluated again.

As the findings indicate, the CIC has not been used enough to generate a true evaluation of its capabilities. Another evaluation of the system should be made in two or three years.

CONCLUSION

In its recommendations on videotape record-making, the Committee states that the use of videotape technology is acceptable. In recognition of the difficulties that court personnel and attorneys had in reviewing and transcribing videotapes, the Committee recommends that typed transcripts should be prepared for all cases appealed to the Court of Appeals and the Supreme Court. Trial courts that elect to use video technology should consider its use for cases less likely to be appealed or for proceedings that would benefit from this technology. The Committee also recommends continued study of court reporting technology and continued efforts to better utilize court reporting resources.

The mission of the Committee was to evaluate the response of attorneys and court personnel to the introduction of video record-making technology. The video pilots took the underlying practices and procedures as they were. The responses to the technology were, in part, driven by Minnesota's legal culture. Changes in the culture could shift perceptions about videotape recording. For example, the preference for a typed transcript appears to weigh against

the expanded use of video. This could, however, be overcome by the creation of video transcription services. Attorneys and appellate personnel would have access to a printed record.

Appellate court objections to video review could be relieved by the preparation of the printed record but could also be changed by modifying the pattern of review. For example, if the Minnesota Court of Appeals adopted a standard of review similar to Kentucky's Court of Appeals, the court would confine its inquiry to the issues raised by the parties. This, in turn, would reduce the amount of trial proceedings to review and might make video review of the record more manageable. The Committee only cites these examples to demonstrate how modifications of practices and delivery of services could shift perceptions of video technology.

As for the Computer-Integrated Courtroom project, the Committee recommends continued use of the facility, in hopes that the local bar will learn how to use the system for complex litigation. The CIC needs to be evaluated in two or three years to determine if it has been used for more than real time transcription and, if so, what are the responses to its "litigation support" features.