Effectiveness of Computer Technology in Jury Selection and Management: The Impact of One Automated System

John C. Domino, Ph.D.

Introduction: Challenges Facing Courts

Trial courts in the United States are facing a steady increase in the number and complexity of civil and criminal cases filed. It is estimated that the total number of new cases filed each year has increased by almost 40% since 1976.[1] As a consequence, judges, court managers, and other court professionals face crowded dockets, document and record storage or management problems, understaffing, and threats to the safety and security of the court and the public.

To compound these problems, there is widespread agreement that the jury system is fraught with a broad range of problems. Nowhere is this fact better illustrated than by the public's sagging confidence in the ability of juries to come to just decisions and by its highly negative feelings toward jury service. A Gallup poll showed that public interest in serving on juries has dropped more than 50 percent since the O.J. Simpson trial began. Fifty-one percent believe that the jury system no longer works properly and that jurors are not representative of the community. Sixty percent of people who are summoned for jury duty fail to report[2] because of long lines at the courthouse, inadequate facilities,

[1] Texas Judicial Council Office of Court Administration Annual Report, 1997
[2] Reported in the American Bar Association Journal 81, November, 1995.

inefficient processing of prospective jurors, long waits while the judge determines who is qualified to serve, the enforced passivity and poor treatment of jurors, unfair exclusions from service, abuse of peremptory challenges by lawyers, and a lack of understanding of the role of the jury.

Automated Jury Systems

Keenly aware of the public's desire for reform, court professionals are developing an array of innovative changes in the way courts select, process, and manage jurors. Sound management strategies alone are no longer sufficient. Technology is playing a major role as more and more courts adopt some form of automated jury management system designed to make the process easier on the juror and more cost effective for the court. Court administrators, trial coordinators, as well as judges and lawyers are growing increasingly dependent on these systems in order to effectively deal with the constraints of time, space, money, and the ever rising number of citizens involved with the justice system.

Many court systems use an automated system that prints checks (including a signature) on the day of jury service, uses bar codes on the summons and juror badges, shows a juror -orientation program on a local cable television channel, and employs an automated call-in system.

Other courts use systems that produce laser printed single page summonses to reduce costs and staff time; optical character readers to input juror information; automated telephone calling devices; and ATM machines to pay jurors.

One cutting-edge automated jury system that has received both praise from court professionals and media attention is made available by Judicial Systems, Incorporated of

Tyler, Texas. Adopted by both federal and state courts, the system is credited to have saved the taxpayers of El Paso County (Texas) $500,000 annually and has motivated more citizens to participate in the jury process. El Paso was the first Texas county to implement the system, cutting in half the number of trips potential jurors usually make when responding to jury summonses. The Oklahoma City courts have had similar positive experiences with the system. According to court officials, the new automated system has eliminated delay, saved money, and generated good will among prospective jurors.

The automated system used by the two jurisdictions mentioned is a multi-function integrated system designed to facilitate random summoning and processing of prospective jurors. Its key feature is the building of a qualified wheel (list) of persons who have been prescreened before they are to serve as prospective jurors. This is accomplished through a customized questionnaire which is mailed to persons randomly selected. The returned questionnaires are then optically scanned to determine who will or will not be subject to being summoned. The system also provides the means to notify and summon, issues badges, maintain statistics, and automate a court's payment system.

Purpose of This Study

Based on the reported successes of Judicial System's product, a decision was made to conduct an empirical study to measure its effectiveness and impact on the jury selection and management process. The existing literature on automated jury management systems allows us to make certain assumptions about the effectiveness of these systems, but there is no significant research that systematically examines the impact of this technology on jury management. Of course, many courts around the country have conducted internal assessments of their systems but have not made the results available.

Thus, the purpose of this study is to examine the impact of one particular automated jury management system on selected courts where it is currently employed in order to determine whether court professionals in those jurisdictions believe that; 1) the "quality" of jury pools has improved; 2) judges and court administrators are able to get through the poll selection process faster; 3) the automated system saved the court money; and 4) whether the system had a positive impact on citizen satisfaction.

Methodology

An extensive survey was constructed and mailed to selected jury administrators, court managers, judges, and other court professionals who staff and operate the district and statutory county trial courts in selected sites. The sites were selected using the sole criteria that they had adopted the automated system manufactured by Judicial Systems, Inc. The focus and scope of this study are guided primarily by a two-part research objective: 1) to ascertain whether the automated jury system presently used by a court has brought about improvements or changes in the jury management process; and 2) to determine the effectiveness of the vendor's technical support and training.

This study does not pretend to serve as a comprehensive overview of available automated systems. There are pamphlets and papers too numerous to mention that serve that end. Such descriptive overviews, inventories, as well as case studies can be obtained from a number of sources, most notably the National Center for State Courts. However, the reader who is unfamiliar with this form of technology will be able to get some idea of its nature and function from the discussion of the findings of the survey. In addition, this study does not employ scientific sampling techniques in choosing its subjects or offer results that are generalizable to all courts using automated systems. It is, in essence, a

case study of the impact of one automated system on a number of courts across the nation.

The survey was mailed in the summer of 1998 to a sample of 43 selected jury administrators, judges, and court clerks in federal, state, and county courts. These professionals had first hand knowledge of the system. In fact, most were involved with its adoption. The construction of the survey was based on questions designed to measure their respondent's opinions on the degree to which the automated system adopted brought about improvements or changes in the jury management process. Additional questions on the survey were designed to measure the respondent's degree of satisfaction with the technical support and training provided by the company from which the system was obtained and some of the common concerns and problems of jury management as identified in the literature.

After the data were collected and entered, the SPSS statistical package was employed to generate the frequencies (percentages) of responses for each question. In addition, follow-up telephone interviews with selected respondents provided additional input on the impact of the system. All of their comments are incorporated into the following discussion of the statistical analysis

Study Findings

The response rate was 81 percent, as 35 out of 43 surveys were returned. Forty-two percent (18) of the respondents are judges, 42% (18) jury administrators, and 16% (6) clerks of court. Recall, that all of the respondents are employed in courts that presently use the same automated jury management system.

The results of the survey are broken down into five tables that reflect: 1) the impact on the efficiency of a court's jury selection/management process; 2) impact on the court's budget; 3) the quality and representativeness of the jury pool; 4) satisfaction with the jury process among citizens; and 5) the effectiveness court personnel training provided by the vendor.

In reporting results, it is necessary to note that not enough difference was found between the opinions of judges, court administrators, and court clerks to warrant separate reporting for each category.

TABLE 1

Impact of Automated System on the Efficiency in the Selection Process (percentage of respondents who *Agree* with the following statements)

Our court's automated jury management system…	
Enabled judges to get through the selection process faster	**85%**
Enabled our court to more efficiently process jurors	**91%**
Streamlined judge-juror interaction (reduced the amount of Time that judges spend with prospective jurors)	**83%**
Reduced clerical time through bar coding	**92%**
Reduced the time it takes to check in jurors	**81%**
Utilizes a questionnaire that is easy to process	**92%**
Saves time in checking in jurors	**88%**
Reduced the number of persons summoned through a	

customized summons form	**88%**
Simplified the jury summons process	**83%**
Improved the accuracy of juror check in	**91%**
Reduced the amount of time involved in the jury selection process	**89%**
Satisfied with the amount of time it takes to select a jury	**91%**

Table 1 provides us with evidence of the overwhelming positive opinions toward the effectiveness of the automated system across a continuum of related issues. There is solid evidence that the system lives up its promises. The central concern addressed in Table 1 is the reduction of the amount of time involved in the jury selection process. Ninety-one percent believe that automation has enabled their court to process jurors more efficiently, thus reducing the amount of time (89%) involved in the process. Follow up interviews revealed that the key to this increased efficiency is the use of an effective questionnaire that allows for the building of a wheel (list) or citizens who are prescreened before they report for jury duty.

One of the key problems that is addressed is judge-juror interaction time. Anyone who has been summoned to the courthouse and has sat through judicial-juror interviews that help determine whether jurors are qualified knows that this can be a frustrating and time-consuming ordeal. However, judges and prospective jurors alike should take heart that technology can offer a solution. Eighty-five percent of the respondents believed that the system enabled judges to get through the process faster and that it streamlined judge-juror interaction (83%).

Follow up phone interviews revealed once again that a well-designed and easy to process questionnaire is key to eliminating unqualified jurors who are needlessly summoned to the courthouse. The system is credited for helping the court make better use of judicial resources by enabling judges to get through the process faster. Court personnel appreciated the fact that the questionnaires can be customized for their court and then easily scanned by an optical mark recognition scanner.

As Table 2 indicates, there is little doubt that the system has saved the courts a significant about of money (88%), reduced personnel time spent on processing jurors (90%), and reduced postage costs (95%).

TABLE 2

Impact of Automated Systems on Court's Budget Devoted to Jury Selection Process (percentage of respondents who *Agree* with the following statements)

Our court's automated jury management system…	
Saved our court money	**88%**
Reduced personnel time spent on processing jurors	**90%**
Made our court make more effective use of its available courthouse space	**81%**
Reduced postage costs through bar coding	**95%**

Follow up phone interviews revealed that many jurisdictions had saved up to $300- $500,000 annually simply by reducing the amount of personnel time devoted to processing prospective jurors. One state trial judge alluded to the fact that plans to go ahead with courthouse remodeling were made after it was discovered how much they were saving on juror processing. Unfortunately, most court employees could give only estimates of the amount of money saved, so no attempt is made here to list the savings to the various jurisdictions. The same can be said for time figures on the amount of time saved by the courts. Certainly further research in these areas is warranted.

One of the major problems faced by our nation's courts is the representativeness of our juries. There is voluminous body of research on the "quality" of jury pools that has been undertaken by independent scholars and government agencies. The concern here goes far beyond summoning qualified jurors who will not be sent home after their initial contact with the court, but with the concern that jury pools (and ultimately juries) are not

representative of the community. It would be impossible to address this issue here, but suffice it to say that technology is now playing a major role in meeting the goals of justice and fairness.

TABLE 3

Impact of Automated System on the Quality of Jury Pools in the Selection Process (percentage of respondents who *Agree* with the following statements)

Our court's automated jury management system…	
Improved the number of qualified jurors that appear on panels	**82%**
Improved the number of jury pools in our court that are racially representative of the entire community	**79%**
Enabled us to generate smaller yet more representative pools	**81%**
Improved your confidence that jury pools are more representative	**89%**
Eliminates unqualified people who would normally be disqualified by the judge	**91%**
Has been effective in disqualifying those who are not qualified to serve through its pre-screening technology	**87%**

As we see from Table 3, 82% of the respondents believe that the system has improved the number of qualified jurors that appear on panels and has been effective (87%) in disqualifying those who are not qualified to serve through pre-screening technology.

The respondents strongly believe that the automated system has increased the number of jury pools that are racially representative (79%), even though the pools are smaller to begin with (81%). The reasons for this, according to one judge, is that the system allows for the development of a superior jury wheel and the fact that as the

process becomes more "citizen-friendly" more qualified persons will answer their summons. This will include many minority members of the community who, for a variety of reason, fail to make it into the jury pool.

Phone interviews noted the importance of other features of the system, namely the capacity to generate reports on the sex and race of those called for jury duty and to compare this data with national or local census data.

TABLE 4

Impact of Automated System on Perceived "Citizen Satisfaction"
(percentage of respondents who *Agree* with the following statements)

Our court's automated jury management system…	
Reduced the number of prospective jurors waiting in the courthouse	**86%**
Improved juror satisfaction with the jury process	**87%**
Improved the satisfaction of jurors through computerized juror payment service	**92%**
Has made jury service much more convenient for those called for jury duty	**84%**
Utilizes a questionnaire that is easy to use for prospective jurors	**97%**

The judge's comment on citizen satisfaction mentioned above leads us to the findings in Table 4. The issue of citizen satisfaction, or "user-friendly" justice has given much attention in the court administration literature. Make the experience less painful and people are more likely do their duty -- and perhaps be enthusiastic about it as well. The respondents believe (87%) that the system helped improve juror satisfaction with the jury process and has made jury service much more convenient (84%). One court clerk comments that long lines at the courthouse and "standing room only" are things of the

past reflected the survey's findings that the number of people waiting in the courthouse has been reduced (86%). She also pointed out that her favorite feature is the computerized juror payment service. It is important to note that the perceptions of citizen satisfaction by the respondents are informed not only by their observations but by juror questionnaires that are sent out after jury service is completed.

TABLE 5

Effectiveness of Technical Support and training provided by Vendor (percentage of respondents who *Agree* with the following statements)

The company from which our court's automated jury system was purchased…	
Helped our court identify problems with the jury selection process	**86%**
Helped our court formulate strategies to solve those problems	**85%**
Helped court staff members learn how to use the system	**84%**
Provides our court with helpful technical support	**88%**
Provides our court with helpful troubleshooting support	**86%**

Lastly, Table 5 addresses the issue of technical support. Many surveys or studies of the adoption of court technology suggest that court personnel are poorly trained to use technology once it is adopted and that very little technical assistance is offered by vendors. However, the respondents in this study rated the vendor company, Judicial Systems, Inc, very highly in the area of technical support (88%). Eighty-six percent stated that the vendor helped their court identify problems, helped to formulate strategies to solve those problems (85%), and helped staff members use the system (84%), One jury administrator went so far as to say that good technical support was crucial to the

success of the overall system. Without this support perceptions of the effectiveness of the system might have been substantially lower.

Concluding Comments

The results of the study provided solid evidence that the automated jury management system, made available by Judicial Systems, Inc., has brought about improvements and changes in the jury selection and management process. Court professionals in selected jurisdictions believe that since their court adopted the system: 1) the "quality" of jury pools has improved; 2) judges and court administrators are able to get through the selection process faster; 3) their court has saved a significant amount of money; and 4) satisfaction levels of judges, court personnel, and citizens have improved.

A well-conceived automated system coupled with good training and technical support can have a positive impact on the effectiveness, efficiency, and fairness of our justice system. As many of the court professionals who participated in this study commented, the investment in this automated system was money wisely spent.