PLANNING ASSISTANCE TO THE
LAS VEGAS MUNICIPAL COURT
REGARDING THE USE OF
ATM TECHNOLOGY
Technical Assistance Assignment No. 3-023

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LAS VEGAS MUNICIPAL COURT
REGARDING THE USE OF
ATM TECHNOLOGY

January 1992

Consultant:

Larry P. Polansky

COURTS TECHNICAL ASSISTANCE PROJECT
Services to State and Local Courts Under a Grant From the State Justice Institute

Brandywine Building, Suite 660
4400 Massachusetts Avenue, N.W., Washington, D.C. 20016-8159
January 21, 1992

Joseph A. Trotter, Jr., Esq.
Director - Justice Projects Office
The American University
3615 Wisconsin Avenue, N.W.
Washington, D.C. 20016

Re: CTAP T.A. No. 3-023; Planning Assistance to the Las Vegas Municipal Court Regarding Court Use of Automated Teller Machine Technology

Dear Joe:

Following review of the materials you provided, I discussed the project at length with Mr. Lipparelli who then forwarded to me a package of materials representing the contacts and information the court already had regarding the systems. This, basically, was internal memoranda regarding the proposed project, word of mouth information about a system under design and implementation in Broward County (Ft. Lauderdale), Florida and presentation materials describing a proposed project of the South Bay Municipal Court in Los Angeles County, California. This was supplemented by a package of materials from several vendors interested in working with the court on an ATM based traffic ticket payment system. My telephone discussion and the materials indicate a desire to put together an Automated Teller Machine (ATM) based system, to be installed in a number of locations around the City of Las Vegas, most probably in supermarkets, which could read bar-coded parking and traffic ticket data and provide an interactive vehicle for information about and payment of the violations. In addition, the machines would be capable of also performing collection and information functions for city agencies as those functions were identified and programmed. The principal initial goals of the system would be to provide 24 hour & 7 day service to the court’s clients, to reduce traffic at the courthouse office and to reduce parking problems around the courthouse.

After a great deal of telephone communication, I have determined that there is not a lot of court related traffic "payment" ATM activity underway around the country. The Broward County effort, which the court is already aware of, is reportedly at the end of a sixty day pilot and will be in full operation very soon. Discussion with the Clerk of Court and the staff person responsible for the project reveals that full operation, at this time, means that four ATM devices will be in operation.
Two of these devices are in the main courthouse: one in the main lobby (and not yet in operation) and one in the Traffic Court area. In addition, two satellite traffic court offices have operational devices. This system is reported to utilize bar code recognition at the ATM and accepts Visa and MasterCard payments, but, apparently, the court has not yet worked out the use of bank debit cards. I could get no cost information from court personnel and contact with the Siemens-Nixdorf staff resulted in a promise to respond to a mailed inquiry regarding that information "if possible." (Copy of letter requesting information is attached.)

The California based project which Judge Brown learned about at an Institute for Court Management program in 1990, never has come to fruition. Discussion with Mr. Crawford indicates he hasn't given up but that he has had to wait until he gets an on-site mini-computer system before pursuing the project further because of the limitations of the Los Angeles main frame system which now provides his case tracking services. Further inquiry with the California Administrative Office of the Courts, however, identified a similar project underway at the Long Beach Municipal Court. Telephone discussion with the Clerk of Court, Mr. James Weaver, indicates that they are completing their testing period and intend to go "live" by February 1 and would be delighted to have visitors view their operation at any time. Their system does not utilize bar code technology (client inputs ticket number through a touch screen keypad) but the court has, apparently, worked out agreements with several local banks regarding the use of bank debit cards in addition to the usual credit cards.

Since all Los Angeles County ticket information is maintained on a central computer which only operates Monday through Friday during normal business hours, Long Beach has installed an IBM AS-400 computer system which allows them to "copy" their files from the central computer and operate 24 hours a day and seven days a week. (It seems that to achieve the maximum benefit from use of the ATMs, a jurisdiction should operate a seven day/ 24 hour program.) Mr. Weaver indicated that "equipment" costs were approximately $300,000 and that extensive programming was required but was supplied without specific costing by the city data processing staff. Additional contact with IBM representatives indicates the availability of a demo video tape which is, hopefully, to be forwarded to me and which I will forward to Las Vegas as soon as it is received. Cost data and other information were not available from my contacts, other than an indication from the IBM rep. that the cost for the ATMs and the basic ATM interface programming (work done by North Communications whose number I have included on the "contacts" page) cost approximately $300,000. The project provides for two ATM kiosks, both of which are to be located on the front steps of the courthouse.
Frustrating telephone calls to NCR and Siemens-Nixdorf did not shed any further light on what activity was occurring in courts regarding the use of ATM devices. Information gathered from court sources indicate that there is some other activity under consideration or in operation. For example, it is reported that Hawaii courthouse(s) are utilizing debit card ATMs (which already were present in the courthouses) to provide touch screen court information to persons at the building. Baltimore, Maryland, where the court pays its jurors in cash at the conclusion of each day's service, is, reportedly, considering the use of the juror bar coded badge and an ATM to accomplish the daily payment process. A number of courthouses have installed ATMs in the building just to provide a source of funds for persons in court who need to pay fines, etc.

My review of the available information leads me to believe that an undertaking such as is under consideration in Las Vegas will involve an investment of approximately $500,000. In addition, success will depend upon the availability of a modern computerized case tracking and financial system which can accommodate the extensive programming necessary to connect the ATM to the court files and to the several financial institutions which will participate. In addition, special programming and equipment may be needed to accommodate bar coded information. It is also imperative that charges be posted quickly so that violators who want to take care of their ticket while it's on their mind, can do so almost immediately. (California reports that it can take as long as ten days for a violation to be entered in the computer system. This has led to an experiment, in Ventura County, with "Hand-Held" computer ticketing devices which prepare the ticket and provide the information in electronic form to the county computer at day's end and will, in the near future, transmit immediately.) Finally, there are monthly telephone line costs for the ATMs and, reportedly, supermarkets will not absorb any of the costs related to having the devices on their premises.

In light of the size of the Las Vegas jurisdiction and the number of transactions per year, it may be more practical to look at more reasonably priced alternatives. For example, modern voice response telephone systems, with access to computer files, can, through the use of push buttons, provide the means to answer questions, determine and indicate the amount due and accept credit card payment. Bank debit card payments could easily be accommodated. Registration for driving school and trial date scheduling, as well as question answering services are already being accomplished in a number of locations through telephone based voice response systems. A push button telephone credit and debit card payment process which can provide case and financial information and automated scheduling services, coupled with a good mail-in envelope could reach even more of the Las Vegas population and its many visitors than large numbers of fixed location ATM devices.
A significant drawback of the telephone based system is the inability to accept checks or cash. Well-designed tickets with mailer envelopes and an appropriate message directing the violator to the telephone system for information and services, however, could easily overcome that shortcoming. Attached is some information regarding the use of voice response systems in the courts and in other "industries."

If it is feasible, I would suggest a one or two day visit to both "operational" locations to see if they are accomplishing what Las Vegas would like to accomplish. Las Vegas court personnel may be able to get the cost, time and effort required, and "criteria for success" information from an on-site visit with comparable staff that I was unable to extract from my telephone efforts. If deemed advisable, I would be glad to accompany Las Vegas staff on such a visit.

Attached also, in the hope that it might be fruitful, is a list of names, telephone numbers and organizations for those persons with whom contact by the court might be worthwhile.

Good luck with the ATM venture. I wish that my efforts had produced much more specific data than it did, but, apparently, Las Vegas has ventured into a truly pioneer area where little is known and less is being disclosed. If there is anything else that I can do to assist, please feel free to call.

Respectfully submitted,

Larry Polansky

Attachments:
LIST OF USEFUL CONTACTS

Broward County Project

Robert Lockwood        Clerk of Court (305) 357-5605
Debbie Talifano        Project Director (305) 357-5605
Kay McNeil             Siemens Nixdorf (813) 289-3619

South Bay Municipal Court

Chris Crawford         Court Admin./Clerk (213) 533-6501

Long Beach Municipal Court

Jim Weaver             Court Admin./Clerk (213) 491-6201
Al Parkinson           IBM Rep. (213) 621-5565
Michael North          North Communications (213) 828-7000

Administrative Office of California Courts

Alan Carlson           Deputy Director (415) 396-9296
Rick Neal              Technology Services (916) 327-4983

Administrative Office of Washington State Courts

Rick Coplan            Technology Services (206) 753-3365

Pacific National Bank

Bob Hensel             ATM Bank Services (206) 585-6679

National Center for State Courts

Kevin Kilpatrick       Tech. Inf. Services (804) 253-2000

IBM

Mary Lou Holter        Sr. Court Tech. (301) 332-2432

Lockheed Information Management Services

Ed Gund                Sr. V.P. (202) 293-4300
January 14, 1992

Ms. Kay McNeil
Siemens Nixdorf
5100 Lemon Street, Suite 103
Tampa, Florida 33609

Dear Ms. McNeil:

I am writing to follow up on my phone call of January 13 and your indication that you might be able to respond to a written inquiry.

My research into the court uses of Automated Teller Machines and, particularly, into the details of the Broward County project is on behalf of the City of Las Vegas Municipal Court. They are seriously contemplating embarking on a similar project and need to know more about the costs, the specific design of the system, equipment and programming required, problems encountered during installation and implementation, and methodology for evaluating the effectiveness of the project.

The court and I would sincerely appreciate any and all information you might be able to supply regarding the Broward County project. Might I suggest that it be forwarded directly to the court, to the attention of:

Mr. Harry Lipparelli
Acting Court Administrator
City of Las Vegas Municipal Court
400 East Stewart Avenue
Las Vegas, Nevada 89101

Thanks for your help.

Sincerely yours,

Larry Polansky

[Signature]
Materials on
Voice Response Telephone System Technology
Imagine how much more productive you and your staff could be if you didn't have to spend so much time on the telephone. Imagine what it would be like if fewer people had to come to the courthouse for routine matters—and those that did come were fully prepared. Imagine if you didn't have to process traffic fines and other payments. Imagine what it would be like to be able to provide information 24 hours a day, 7 days a week.

You no longer have to imagine. A new technology called voice response allows callers to receive and leave information 24 hours a day, 7 days a week, without staff assistance.

Don't confuse voice response with the automated switchboard operator systems you hear all too often when you call a business or government agency. Rather, voice response is a sophisticated technology that allows telephone callers to conduct court-related business without visiting the courthouse. Callers can use their touchtone telephones to interact with (but never harm) databases.

Most voice response systems consist of a PC or minicomputer connected to telephone lines via interface cards. Words, phrases, sentences, and messages are recorded into the voice response system. This system works with your telephone system and may stand alone or be connected to your court's computer system.

Although it's relatively new, voice response is being used in many courts. For example, the 36th District Court in Detroit, Michigan, uses voice response to enable callers to automatically schedule court appearances. The voice response system is linked to the court's database, which contains available court dates along with the arresting officer's court schedule. Callers, using the keypad on a touchtone telephone, enter the citation number and the arresting officer's badge number. The voice response system presents the caller with alternative dates and times and asks the caller to respond by pushing certain buttons on the keypad. Sounds complicated? It isn't. In fact, at this particular court, 50 percent of all callers can automatically schedule their continued on page 3
PROJECTS IN PROGRESS

What’s going on in your court or company? What’s the status of your technology projects? Our readers want to know. Write or call Technical Services with your news item. We recently found out that...

The Indiana Court of Appeals has begun implementing a wide area network. The network interconnects all of the 15 judges’ chambers in five appellate districts. Each chamber LAN contains a non-dedicated IBM OS/2 LAN server and four DOS-based workstations. Nine LANs are located in the Indiana statehouse and six in the Merchants Bank Plaza Tower, which are connected with remote bridging software. The current implementation phase involves the integration of an IBM AS/400 midrange computer for calendar and electronic mail functions as well as additional disk storage. Current applications include word processing, database management, and access to legal information services. Please contact Glenn L. Kopf, WAN Administrator, Indiana Supreme Court (317) 233-3708.

Lockheed Information Management Services Company has been awarded a one-year contract to automate Philadelphia Traffic Court’s moving-ticket processing and project management services. Lockheed IMS will study all aspects of the court’s operations extensively, as requested by traffic court president judge George Twardy. Other professional and technical services, including new software for interfacing with other government agencies and a new enforcement plan, are also included in the contract. Lockheed IMS will provide the court with all necessary hardware and software, develop a public education program on the sanctions for nonpayment of tickets, and train all personnel using the system.

PRWT Services, Inc., a Philadelphia-based minority subcontractor, will provide data entry, cashiering, and correspondence services for Lockheed IMS. The heart of the Lockheed IMS ticket-processing system is its Ticket Information Management System (TIMS), a comprehensive approach designed especially for high-volume activity. TIMS supports all functions of a typical traffic court, including data entry and cashiering, mail payment processing, DMV reporting, notice and warrant generation, and driver’s license suspension processing. The system is readily adaptable to the needs of each client. For more information, contact Steve Lipsitz (201) 692-2900.

In February 1991, Unicorn Systems Company finished installing, implementing, and training staff on the JURY+ Jury Management System in Ventura County, California. JURY+, which was originally developed for Los Angeles County, is the most sophisticated jury management system available. JURY+ automates the various steps of jury administration, including identifying juror candidates, randomly selecting jurors for service, taking juror attendance, assigning jurors to cases, keeping track of case history, handling juror payroll and service certifications, and maintaining comprehensive statistics that enable jury management personnel to do their jobs. In Ventura County, JURY+ operates on a PC LAN.

(Each week, 4,800 summonses are mailed yielding approximately 1,200 available jurors. Jurors are called in groups of 50.) JURY+ will also operate in standalone PC, minicomputer, and PC/mainframe cooperative processing environments. Unicorn Systems Company has a relationship with Los Angeles County, whereby Unicorn has exclusive marketing rights to distribute JURY+. Additional installations are scheduled for the first half of 1991 in the states of Washington, Virginia, and California. Contact Ms. Judy Keefer, Unicorn Systems Company (800) 222-6974 or (800) 232-2427.

Reader Survey

The National Center for State Courts is trying to identify courts around the country that are using artificial intelligence (AI), expert systems, neural networks, or any other form of knowledge-based processing. If you or anyone you know is using AI in a court, please write, telephone, or fax the National Center for State Courts, Court Technology Database manager.
The Use of Optical Disks for Public Records

The Association for Information and Image Management's latest technical report (AIIM TR25-1990, TR25) targets federal, state, and local government agencies considering the use of electronic document-imaging systems and optical disk technology for records management. It helps readers to make informed decisions regarding the use of optical disks for public records.

The report consists of three sections. Section one states the report's purpose and scope and contains a helpful list of references and definitions. Section two contains an overview of optical disk technology, devices, and media. Even those familiar with optical disk technology may find this section worthy of more than just a brief skimming. Section three brings to light critical issues and concerns one should know when considering the use of optical disks for long-term and permanent public records. This section narrows down the hodgepodge of underlying terms often associated with any technology and establishes a well-rounded understanding of optical media and its promises.

The report, produced through a National Historical Publications and Records Commission grant, should assist anyone entrusted to plan, implement, and operate an optical disk-based information retrieval system for public records. For additional information or to purchase TR25, please contact AIIM Publication Sales, 1100 Wayne Avenue, Suite 1100, Silver Spring, MD 20910 (301) 587-8202, fax (301) 587-2711.

NCSC Staff Position

The National Center for State Courts seeks candidates for a staff associate position assisting with current and future technology projects. Assignments will include researching and responding to requests for technology information from courts, agencies, and vendors; interviewing staff and evaluating systems at courts; preparing reports and demonstrating technology; writing articles based on current industry developments; assisting in developing standards for court case systems; and assisting with technology conferences and programs. The position requires a bachelor's degree and a minimum of two years' court experience; a graduate degree in judicial administration, computer science, or other related field is preferred. Also required are a knowledge of court operations, management, and technology and the ability to speak and write clearly and effectively. Experience in research, training, or technical writing is also desirable. Starting salary range is $27,421 to $35,873, with excellent fringe benefits. Submit resume by May 15 to National Center for State Courts, Dept. T8, 300 Newport Avenue, Williamsburg, VA 23187-8798.

EOE/AA.

Voice Response Technology, continued

own appearance dates without staff assistance. The court also uses the same voice response system to answer commonly asked questions.

For the past five years, the Los Angeles Municipal Traffic Court has successfully used voice response to answer common questions. It is now expanding its system to allow callers to pay traffic violations automatically over the telephone using a credit card. Both credit card authorization and citation updating are managed by the voice response system. The caller pays a 2 percent fee for using the service. This is a win-win situation for both the caller and the court. The caller benefits by paying his or her fine even if cash funds are low, conducting court business after-hours, and in many cases, eliminating a trip to the courthouse. The court benefits by reducing uncollectibles and check processing and by handling fewer people at the windows.

Other uses for voice response in the court include case status; child support and alimony payment status; traffic school eligibility and scheduling; and bail amount, due date, and location for posting. Combine fax technology with voice response and callers can automatically request (and pay for) court decisions to be sent to their fax machine.

In conclusion, voice response is a proven technology with tremendous application in the courts. Best of all, it not only benefits the court but benefits the public as well.

Ken Ravazzolo is Vice-President of Simpact Associates, Inc. For further information, call (619) 565-1865, ext. 1398.
CITE is a software application designed to automate the administrative and management procedures for courts of limited jurisdiction. Originally developed by the Snohomish County South District Court in Washington State, CITE supports docketing, indexing, scheduling, calendar and notice preparation, forms generation, revenue and trust accounting, and statistical and management reporting on DEC's VAX family of computers and on standalone or networked PCs. The system manages various casetypes, such as traffic, criminal, civil, domestic relations, small claims, and probation, with related accounting and management applications.

CITE is "person based" for traffic and criminal cases and is designed to handle multiple jurisdictions. Person based means that once information on a person has been recorded in the system, subsequent citations can be linked to that person without reentering the information. CITE is "case based" for civil matters, supporting multiple plaintiff/petitioners and defendant/respondents per case.

CITE can be tailored to a specific court through the use of data tables. During installation, information such as jurisdiction, judges, hearing types, docket and condition text, and accounting disbursement categories is entered into tables.

The system assigns each case a number. This case number is the primary way to access information, although alternative access methods are supported. Traffic and criminal citations and probation-monitoring information can be accessed by defendant name, alias, citation number, or case number. Civil cases can be accessed by case number, plaintiff/petitioner, or defendant/respondent.

The citation intake feature has a name search capability that allows the user to enter all or a portion of a name. The date of birth and driver's license number are displayed for verification. If no match is found, the personal information is displayed. Address history and aliases can be electronically communicated to police upon the issuance of a warrant.

Criminal case history information, immediately available to all users, includes violation date, citation number, charge and disposition information, sentencing judge, court date and time, and accounting summary. The system also indicates the number of outstanding warrants and failure-to-appear notices that have been issued. This information is extremely helpful to judges during courtroom proceedings.

Docketing is supported with a table of coded entries. The textual translation that appears on the formal docket is also maintained in this table. CITE provides three lines for entering docket information that is not included in the table of standard docket entries, such as the date, audiotape and tape counter number, and judge's name.

CITE supports a master calendar, where users can establish blocks of time for each hearing type. The system can automatically schedule cases within these blocks of time. For example, if a case is continued, the time allotted to the continued case is added back to the available scheduling time. Additionally, the automatic scheduling feature considers judicial disqualification and requests for a particular judge or prosecuting jurisdiction.

Accounting entries are integrated with all CITE applications. For example, once a sentence has been entered and a fine imposed in the courtroom, the information is immediately reflected within the accounting function for printing receipts or scheduling payments.

Data is collected at month's end in the form of log sheets, municipal billings, intake and setting statistics, case-aging reports, and accounts receivable status reports. Users can supplement CITE's set of more than 50 standard reports with their own ad hoc reports.

Since CITE's implementation in 1985, revenues in the Snohomish County District court have increased 90 percent from the automation of accounts receivable and collection procedures. Because CITE had automated the repetitive manual tasks associated with case processing, the court's average annual increase in filings of 8 percent to 10 percent (a total of 30,012 filings).
MEMORANDUM

February 12, 1991

TO: Technical Services Staff

FROM: Cheryl H. Letchworth

RE: Innovative Idea

I received a call yesterday from Jack Byers, 12th Circuit, Sarasota, Florida, about a unique calendaring system they recently implemented. Pre-printed telephone numbers are assigned for each judge. The attorney calls the telephone number for the particular judge and is asked to enter (using the push-button phone) their attorney id number, case number and 15, 30, 45, or 60 for desired hearing length. The computer figures out the next available date and gives the attorney the opportunity to accept the date or try up to 2 additional times. After three times, the call is forwarded to the judge’s secretary for scheduling. A confirmation number is assigned when a hearing date is accepted. The attorney must use this confirmation number to make changes.

Since implementation, the judge’s secretaries have experienced a 50-75% decrease in the number of calls they used to be required to handle. I have asked Jack to write up a 3-4 page description that we could use in the CTRs and to also consider nominating this for the 1991 CTRs. Stay tuned!!!

P.S. Everyone should be impressed that I composed this using WFW--all by myself!!
36TH DISTRICT COURT
SIMPLIFIED TELEPHONE SYSTEM DIAGRAM

CALLER DIALS
965-2200
OR
965-8700

CALL IS ROUTED TO
36TH DISTRICT COURT

AT&T SYSTEM 75

THE AT&T SYSTEM 75 ROUTES
965-2200 AND 965-8700 TO THE
D.A.S. MULTI-LINE DISK SYSTEM
(THE VOICE RESPONSE SYSTEM)

ROTARY DIAL CALLS TRANSFERRED
to Pre-Court Date Storage
(VIA THE AT&T SYSTEM 75)

ROTARY DIAL CALLS TRANSFERRED
to Telephone Information
(VIA THE SYSTEM 75)
<table>
<thead>
<tr>
<th>Menu</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERAL MENU</td>
<td>130</td>
</tr>
<tr>
<td>Court Hours, Address &amp; Directions</td>
<td>133</td>
</tr>
<tr>
<td>Civil Division Menu</td>
<td>142</td>
</tr>
<tr>
<td>Criminal Division Menu</td>
<td>134</td>
</tr>
<tr>
<td>Bond Information</td>
<td>107</td>
</tr>
<tr>
<td>Landlord &amp; Tenant Division Menu</td>
<td>135</td>
</tr>
<tr>
<td>Juror Service Information</td>
<td>136</td>
</tr>
<tr>
<td>Parking Violation Information</td>
<td>137</td>
</tr>
<tr>
<td>Prisoner Information</td>
<td>139</td>
</tr>
<tr>
<td>Probation Information</td>
<td>140</td>
</tr>
<tr>
<td>Traffic &amp; Ordinance Division Menu</td>
<td>100</td>
</tr>
<tr>
<td>TRAFFIC &amp; ORDINANCE MENU</td>
<td>100</td>
</tr>
<tr>
<td>Case Inquiry &amp; Case Scheduling</td>
<td>200</td>
</tr>
<tr>
<td>General Information</td>
<td>101</td>
</tr>
<tr>
<td>Accident Tickets</td>
<td>103</td>
</tr>
<tr>
<td>Adjournments</td>
<td>104</td>
</tr>
<tr>
<td>Bond Information</td>
<td>107</td>
</tr>
<tr>
<td>Cancellation of Tickets</td>
<td>109</td>
</tr>
<tr>
<td>Twenty-one Day Tickets</td>
<td>113</td>
</tr>
<tr>
<td>Informal/Formal Hearings</td>
<td>117</td>
</tr>
<tr>
<td>Lost or Misplaced Tickets</td>
<td>120</td>
</tr>
<tr>
<td>Misdemeanor Tickets</td>
<td>121</td>
</tr>
<tr>
<td>Payment of Fines</td>
<td>123</td>
</tr>
<tr>
<td>Suspended License</td>
<td>125</td>
</tr>
<tr>
<td>CIVIL DIVISION MENU</td>
<td>142</td>
</tr>
<tr>
<td>General Information</td>
<td>143</td>
</tr>
<tr>
<td>Disbursements</td>
<td>149</td>
</tr>
<tr>
<td>Small Claims</td>
<td>145</td>
</tr>
<tr>
<td>Fee Schedule</td>
<td>144</td>
</tr>
<tr>
<td>Garnishments - Partial Payments</td>
<td>147</td>
</tr>
<tr>
<td>Motions</td>
<td>148</td>
</tr>
<tr>
<td>Summons and Complaints</td>
<td>146</td>
</tr>
<tr>
<td>Information on Indigents</td>
<td>170</td>
</tr>
<tr>
<td>CRIMINAL INFORMATION MENU</td>
<td>134</td>
</tr>
<tr>
<td>General Information</td>
<td>156</td>
</tr>
<tr>
<td>Criminal Warrant Information</td>
<td>157</td>
</tr>
<tr>
<td>Courtroom Information</td>
<td>158</td>
</tr>
<tr>
<td>Criminal Fines and Bonds</td>
<td>159</td>
</tr>
<tr>
<td>Criminal Referral Agencies</td>
<td>160</td>
</tr>
<tr>
<td>LANDLORD &amp; TENANT DIVISION MENU</td>
<td>135</td>
</tr>
<tr>
<td>General Information</td>
<td>150</td>
</tr>
<tr>
<td>Indigent Fees, Waiver of Fees</td>
<td>152</td>
</tr>
<tr>
<td>Motions &amp; Stays of Proceedings</td>
<td>153</td>
</tr>
<tr>
<td>PROBATION DEPARTMENT MENU</td>
<td>140</td>
</tr>
<tr>
<td>General Information</td>
<td>161</td>
</tr>
<tr>
<td>Fines, Restitution, Court Costs</td>
<td>162</td>
</tr>
<tr>
<td>Traffic Safety School</td>
<td>163</td>
</tr>
</tbody>
</table>

* This is not a complete listing of system messages.
STATE OF MICHIGAN
36TH District Court Voice Response System

A. OFFICER DATA SET

T&O PERSONNEL MAINTAIN OFFICER RECORDS, ASSIGNING EACH OFFICER TO A GROUP AND ENTERING FURLough DATES WHERE THEY COINCIDE WITH THE COURT SCHEDULE.

B. VOICE RESPONSE SCHEDULE DATA SET

T&O PERSONNEL ENTER AND MAINTAIN COURT SCHEDULE BY PRECINCT GROUP.

C. CASE DATA SET

T&O PERSONNEL ENTER CASES AND LEAVE COURT DATE BLANK FOR THOSE CASES WITH APPEARANCE DATES.

D. OFFICER DATA SET

USING OFFICER, VOICE RESPONSE SCHEDULE AND CASE DATA SETS, AN A-9 BATCH PROGRAM CREATES A SCHEDULE CASE RECORD FOR EVERY CASE THAT CAN BE SCHEDULED THROUGH THE VOICE RESPONSE SYSTEM. THESE RECORDS ARE DOWNLOADED TO THE VOICE RESPONSE MICRO COMPUTER.

S. HANRAFORD 10-14-88
36TH District Court  Detroit, Michigan
Voice Response System

A-9 Mainframe

E. The A-9 mainframe and the voice response micro communicate with each other to maintain files and share information. All cases that can be scheduled by the voice response system are downloaded to the V.R. micro. As cases are scheduled, docket records are uploaded from the V.R. micro to the A-9 mainframe. The A-9 case record is then updated with docket information.

G. Court personnel will also be able to schedule cases online using A-9 terminals. Personnel will be able to view a selection of open court dates and choose the most appropriate one.

H. A-9 programs will produce a variety of reports that will help monitor the system, provide documentation and aid court procedures. Reports include but are not limited to the following:

- Docket reports
- Officer reports
- Reports of the voice response
- Schedule data set
- Daily reports of cases scheduled
- Notice to appear forms
- Error reports

****** Please note: It is imperative that court personnel accurately maintain the officer and voice response data sets or this system will not function properly. The court schedule must be entered on a timely basis as cases will be scheduled several months in advance.

S. HAMBURGER 10-14-98
II. BASIC RULES AND FORMULAS.

A. Cases that qualify for the V.R.S.
1. Judges will be assigned N, U, and X cases. They will also handle the S900000 series.
2. Magistrates will hear the A and E series and the rest of the S series. There will be no accident cases in the Voice Response System.

B. Voice Response cases will be given an appearance date, calculated by the computer during case entry. The appearance date is the first working date 21 days or more after issue date.

C. The defendant must schedule his or her court date before the appearance date when using the Voice Response micro.

D. The first available court date for a case will be at least 28 days after the appearance date. The A-9 mainframe will provide 2 court dates to the V.R.S. micro for each case. Officer furloughs are considered when assigning dates.

Consider the following example using the court schedule of January through June 1989:

Officer Alcala, badge 29 of precinct 3, group 1, writes a ticket on March 15, 1988.

\[
\begin{align*}
88075 & \quad <---------- \quad \text{Julian date 3/15/88} \\
88096 & \quad \text{Appearance date} = 4/05/88 \\
88124 & \quad \text{Minimum court date} = 5/03/88
\end{align*}
\]

The next three possible court dates are:

June 27, 1988  ** Note: The court date of July 25, 1988  5/2/88 will be skipped because it is before the minimum date.
August 22, 1988

E. Guidelines to establish case loads for Judges and Magistrates were agreed upon with court management. Defendants who come to court have an average of 3 cases each. Judges will have a maximum of 45 cases scheduled for the AM session. This means that there will be approximately 15 defendants before a judge during morning sessions.
E. (continued)
Magistrates will hear a maximum 150 cases during the morning session and 50 for the afternoon. That means he or she will have approximately 50 defendants in the AM and 17 defendants in the PM. The maximum cases per session can be adjusted if it becomes necessary.

F. Some leniency has been built into the Voice Response System. For example, if a customer is calling to schedule 3 cases and there are 48 already scheduled for the chosen court date. The system will allow all 3 cases to be scheduled for the same court date even though the maximum is 50 cases. Note that the cases must be scheduled during the same session.

III. TWO KINDS OF SCHEDULING
There are two distinct environments in the Voice Response System.
A. The Voice Response micro receives cases from the A-9 that may be scheduled by defendants via telephone.
B. The A-9 mainframe scheduling module provides court personnel with the ability to schedule cases to the same docket. There are fewer restrictions for scheduling on the A-9. The system will display available court dates and a date can be selected.
Private Networking
CPE, Transmission and Management Options for Dedicated Networks

DATABSE
THREE FOR CONTEL
Bowen & Co Inc., Fireman's Fund Insurance Co. and United States Inc. have each signed separate contracts with ConTel ASC for VSAT services. The combined value of the three contracts is approximately $24 million, according to ConTel, Rockville, Md.

NEW VSATS FOR VALLEN
Vallen Corp. has installed a Cylix Communications Corp. VSAT network that will link Vallen's IBM AS/400 systems to its 25 distribution centers worldwide. Vallen, Houston, Texas, makes industrial safety and health products. Under terms of the contract, valued at about $1 million, Vallen will utilize Cylix's shared hub facility to support applications such as on-line order entry, billing and inventory status systems. Vallen previously utilized AT&T terrestrial lines to connect the array of locations.

ASTROCOM NAMES CEO
Astrocom Communications Inc. has named Stephen O'Hara as the company's new CEO, replacing Sidney Jenson, a founder of Astrocom. O'Hara will retain the positions of president and chief operating officer, positions he held since he joined the St. Paul, Minn.-based company in September 1988.

Business Responds To Voice
BY SAROJA GIRESHANKAR
Second Of A Three-Part Series

NEW YORK—Just as voice messaging is fundamentally changing the way people use telephones to communicate, voice response—the technology that lets a telephone get recorded messages and tap into data bases—is transforming the way people are conducting everyday business activities.

Recorded messages tell callers about insurance rates and premium structures. They describe how to get a Social Security Number. Computer-generated voices give brokerage clients the latest stock prices and bank account balances. All of these services use voice-response systems to do things that call-center agents and customer-service representatives once did.

Voice-response systems are another aspect of voice processing—technology that incorporates the voice in overall communication systems. Essentially, the systems are automated, interactive answering machines. At their simplest, they give callers a prerecorded message. At a more complex level, the level at which most systems operate—voice systems provide access to computer databases when callers press the appropriate keys on a touch-tone telephone, or say coded words and digits.

The systems are cropping up in a variety of areas. Universities and government agencies use them. So do banks, airlines, department stores and real estate agencies. All of them want to save money and increase customer satisfaction—both of which usually come down to saving time.

Federal Express Corp., for example, provides a voice-response system for customers who want to use its courier services. Those customers enter their account numbers, their zip codes and the names and places of packages are picked up, by punching in codes on a touch-tone telephone. A recorded voice gives them a confirmation number.

“they have instant access, and they also can book the pickup within 30 to 45 seconds,” said Young Kim, manager of international customer service, planning and support for Federal Express. Before the system was installed, it usually took customers between 70 and 90 seconds to complete the call.

(The Voice, Continued on Page 18)

InteCom Users Are Happy—So Far
BY MARGIE SEMILOFF

ALLEN, TEXAS—Two new owners of InteCom's IBX switches are satisfied with their decision to buy the voice-data PBX, in spite of the recent troubles of InteCom's parent, Wang Laboratories Inc.

The users' satisfaction lies in part with the elegance of the IBX technology, particularly its ability to handle data. Also, both users have secured a service contract from their IBX vendor, Bell Atlantic System Inc., Princeton, N.J., and not InteCom, based here.

InteCom Corp. decided last January to replace its four old PBX switches with one IBX S-80 to serve the company's 2,500 users in two main locations, said Chester Sienko, director of network operations for Healthplan, Richmond, Va. The customer is being done in phases, he said, and will be completed in December.

Arthur Brusimam, director of telecommunications at the College of William and Mary, Williamsburg, Va., said the college decided last December to purchase an IBX S-90 to replace central switch service. The college will cut over the switch in October.

In both cases, the switch is packaged with InteCom's Sphynx telephone and data management software system and an Octel Communications Corp. voice-mail system.

The Future Is Now: Firms Using ISDN
Hancock Chooses AT&T Info-2
BY JOHN FOLEY

BOSTON—John Hancock Mutual Life Insurance Co. has taken its first step into the ISDN arena by signing up for AT&T's Info-2 service.

Stephen Kelley, director of telecommunications for John Hancock, said the company has been using the service since May. Initial plans, he said, are to determine how to use Info-2's advanced number identification feature.

Eventually, Kelley said, the insurance company expects to use Info-2 to perform integrated voice and data uses.

Info-2 Uses PRI

AT&T's Info-2 service uses the integrated services digital network Primary Rate Interface to deliver the calling party's telephone number along with the call. PRI is defined as having 23 64-kilobit-per-second bearer, or "B," channels and one 64-kilobit signaling, or "D," channel.

The service runs from an AT&T 4ESS tandem switch in Hancock (Hancock, Continued on Page 16)

Comdisco Cuts Costs With ISDN
BY JOHN FOLEY

SAN RAMON, CALIF.—Comdisco Disaster Recovery Services Inc. is using the ISDN Primary Rate Interface to reduce its internal communications costs, while simultaneously offering new services to its own customers.

John Starkey, a telecommunications product manager in the Chicago office of Comdisco, said the integrated services数字 network PRI connection system cost the company $1,000 per month, compared to earlier services.

Comdisco uses AT&T's Call-by-Call PRI service in conjunction with an AT&T DCF/75 ISDN Communication System, Generic I version, at its facilities here. The ISDN Primary Rate interface operates at the T1 speed of 1.544 megabits per second. It has 23 bearer, or "B," channels and one signaling, or "D," channel, each operating at 64 kilobits per second.

The Call-by-Call offering gives Comdisco flexibility in using its T1 bandwidth by letting the company reconfigure the number of channels allocated to WATS calls, 800 calls and switched (Comdisco, Continued on Page 16)
Voice-Response Systems Are Changing

About 2,500 systems—built by Synectics Inc., based in Phoenix—have been installed at five Federal Express sites in Memphis, Tenn., headquarters and facilities in Somerset, N.J., Chicago, Sacramento, Calif., and Phoenix. Between 22,000 and 25,000 people use those systems on an average day. Cutting in half the time it takes to answer each of their calls is of considerable importance to Federal Express. "The biggest benefit to us is automation," Kim said. "It supplements the agents and replaces CRTs and phone lines. He would not specify the dollar savings, but he said it was significant.

At Georgia State University in Atlanta, on the other hand, a voice-response system means money earned rather than money saved. The university uses a system from Percepion Technology Corp., Canton, Mass., to register students and record their tuition payments. A student calls up, keys in an identification number, then punches in codes for the course he wants to take and the method he will use to pay his bill. The system compares the data with information on the student in a computer database. If the student is ineligible to take a particular course, the system tells him so and asks him to pick another one.

By using the system, students can register day or night, any day of the week, said Lance Green, the university’s registrar. That helps the university to make money: "The economics come into play not in the cost side but the revenue side," Green said. "If the registration is easy and convenient enough, you retain students."

Rapid Market Growth

The kind of benefits Federal Express and Georgia State are seeing is driving rapid growth in the voice-response market. U.S. manufacturers sold $238 million worth of voice-response equipment in 1988, according to Vanguard Communications Inc., a consulting firm in Morris Plains, N.J. That’s an increase of about 44 percent over 1987’s sales of $165 million. By 1992, Vanguard predicts, sales will reach $1 billion.

But vendors can gain sales only if users keep seeing benefits, and users will see those benefits only if voice-response technology is implemented effec-

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Business For Companies, Universities

Tively, "The long-term challenge is to be able to provide [users] tools to effectively develop applications themselves," said Don Von Doren, chairman of Vanguard. Application development is important to users because voice-response applications usually need a high degree of customization, involving critical links to computer databases.

Voice-response equipment vendors realize this. Most of the leaders in the field offer what they call application generators--a combination of hardware and software tools that users can manipulate to suit their needs.

Besides developing the applications, users need to be able to update them—to change the responses that their voice-response systems give. At least one vendor thinks updating is more important. Users do not want to invest a synthesized computer voice using speech synthesis technology. In this instance, the text message heard by the caller is translated into a synthesized voice. All of this is accomplished in a matter of seconds, because voice-response systems and computers are connected on a real-time basis.

**Digital Versus Synthetic**

What voice response vendors usually offer is digitized speech where messages are stored in digital form. The digitized speech sounds more like a human voice as opposed to synthesized speech. But synthetic speech, also called text-to-speech, provides an unlimited vocabulary. Digitized speech systems are limited to a certain number of words and phrases.

Voice-response systems with speech synthesis capabilities are ideally suited for applications where callers need access to a wide variety of host databases. Systems with digitized speech target applications where only limited vocabulary is needed.

Voice-response systems are typically used in customer service applications—for example, reservation for air travel, hotel and automobile rentals as well as banking and stock market inquiries. In almost all applications, the voice-response equipment replaces live operators, with significant savings in terms of positions and transaction time.

Callers who are served by live operators very often will have to wait longer for service because interaction between a customer-service representative and a caller usually cannot be restricted to a set time. If the volume of calls increases, the number of operators cannot be easily increased. The recorded messages of automated systems, however, easily can be made accessible to more callers.

Voice-response applications can be found anywhere: at very small customer sites, where a single unit is used for a localized inquiry need, and at large customer sites, where hundreds of units are networked and linked to multiple databases serving customers from around the country.

**Telephones As Computer Terminals**

NEW YORK -- Voice-response systems let callers use the telephone—the touch-tone and, in some instances, the rotary dial set—as a computer terminal to get access to a wide variety of database information.

Voice-response systems, similar to voice-messaging devices, are also frequently used in auditex applications to provide pre-recorded stored messages. In such applications, callers are guided via voice prompts to press specific keys on their touch-tone telephones in order to access appropriate recorded messages. Having selected the required messages, callers are sometimes provided the option of leaving messages instructing the service provider to send out forms, applications or any related literature.

When connected to host computers, voice response units act as terminals on that computer and thereby get information that is stored on the computer. The information from the database is converted, in some cases, to a whole of time in building applications from scratch, said Paul Gaspero, president of VoiceTel Corp., in Chelmsford, Mass. "They want 80 percent of the applications modeled to be complete and they want to model only about 20 percent," Gaspero said. VoiceTel is now developing software application modules for vertical market applications that contains the bulk of what users would need for a given application.

Another alternative to making users customize their applications is to sell them a custom application in the first place. In a sense, that is what Brite Voice Systems Inc., in Wichita, Kan., does. The company offers six vertical applications, targeting the real-estate, publishing, hospital, cellular, "1-900" service and yellow-pages voice-directory areas. "We become an expert in the [vertical market] field and we create an image and an awareness of the product," said Brian Schoochnohler, Brite's director of marketing. "We combine for the expertise it offers in a particular market rather than a vendor of voice response product, he said.

Customization as well as voice messaging software tools solve only some of the challenges. Voice response users are an extremely cautious lot, generally speaking, who are not about to have anything go wrong with the instruments that affect the core of their businesses—customer service and call centers.

Fortunately, users are rapidly growing more sophisticated in their approach to—and their appreciation of—voice-response systems. "A need is beginning to evolve," said Peter Comen, vice president of Periphonics Corp., in Bohemia, N.Y. "In the past, we had to educate them. Today, we spend time on how to make systems more valuable, trying to embrace.

Voice response vendors are now focusing on providing advanced capabilities—advanced networking, speech synthesis, integration with voice messaging, facsimile and electronic mail systems. They have to; their customers are demanding those features.

A Chemical Bank in New York, for example, assistant vice president Leslie Blumenthal said the bank wants more text-to-speech capabilities, especially the ability to do synthesized speech, in its Perception Technology system.

Synthetic speech will let a user update recorded messages from a remote terminal instead of changing recorded messages as in a recording studio.

Sophisticated capabilities notwithstanding, why are users not willing to embrace voice-response technology? "It's a convenience item for callers," Chemical Bank's Blumenthal said. Chemical Bank's voice response unit fields calls from an average of 25,000 customers a day and provides them instant access to information on their accounts, loans and other related data.

In the case of Washington-based U.S. Air Group Inc., it is the system's reliability that has made converts of more than 1,600 employees who use it every day. The U.S. Air systems lets pilots and flight attendants bid on their air routes and schedules. It also helps to speed up the airline's preflight check-in procedure. The company, said Stephen Raeder, U.S. Air's MIS manager of applications development, "From a psychological and cultural point of view, as long as it was reliable and worked."

Next week: The future of voice processing is integration.
Voice/data combos: Service with a dial

BY PAUL GILLIN

When John Stossel wants to check the value of his stock portfolio, he doesn't pick up the paper; he reaches for the phone.

Stossel can also buy and sell stock and check his account balance by calling a toll-free number and pushing a few buttons on his telephone keypad. He never speaks to a broker.

"It's simple to use, and it's private," says the Apple Computer, Inc. software engineer. "I can call from my desk at work and buy and sell stock, and nobody else knows what I'm doing. I always know how the conversation's going to go."

Stossel's "broker" is actually a Charles Schwab & Co. service called Telebroker. Schwab customers in 30 metropolitan regions can now check stock prices and buy and sell securities by phone at any time of the day or night.

"We're taking over 30% of the firm's trades [this way] already, and we believe eventually we can off-load as much as 20% of the routine branch transactions," says a voice response system. says Elizabeth Wilcox, senior product manager of the Telebroker program at Schwab.

Schwab is only one of the many businesses that are moving in computerized voice response systems and moving out telephone operator consoles. The systems effectively turn a telephone into a computer terminal, allowing callers to execute financial transactions, place orders, register for classes and retrieve information by punching the 12 buttons on the telephone keypad.

The systems can also lend a hand in areas like market research and product planning by tracking which services and information are most frequently requested.

With most voice response systems moving onto personal computers, declining storage costs making digitized voice more affordable and use of portable telephones spreading rapidly, the technology is fast becoming practical for most businesses whose bread and butter is getting information to their customers.

PC-based systems that support four telephone lines can be had for as little as $15,000, while high-end systems handling 48 simultaneous calls go for about $50,000.

Port of calls

Customers of Seattle-based Store-doring Services of America can call a number at any of three West Coast ports and get up-to-the-minute information on the status of overseas goods coming into port. Timeliness is

Ford parts division has a better idea

Auto maker's re-engineering effort cuts delivery times, slashes inventory and saves big bucks

BY JOSEPH MAGLITTA

One of the most dramatic changes at Ford is an eight-year effort by Ford to radically change how it delivers repair parts to its 9,000 dealers and parts distributors in the U.S.

Rogers in 1983 and now nearing completion, the Ford re-engineering project uses decentralized IBM 4381s and an innovative "carousel" warehouse system that stocks two or three million transactions per day. The main objective is to speed up delivery of the millions of parts shipped annually by the $5 billion division and to improve order accuracy.

Although the project won't be finished until mid-1991, Ford says the benefits have already been dramatic.

"We're already operating at our projected 1995 capacity," says Pete McIntosh, supply and distribution manager at Ford's Parts and Service Division in Dearborn, Mich.

So far, the new approach has helped eliminate 1.5 million square feet of costly parts inventory, lower reorder times for priority centers from 72 to 48 hours, close 10 regional parts distribution centers and boost shipments in certain large warehouses by 45%, according to McIntosh.

The new approach also gives Ford executives much better control of daily operations than batch systems running on decade-old Boroughs mainframes, says Dick Havala, manager of the parts operations systems department.

"We could never view on the computer what [warehouses] were doing," Havala explains. "Now we can view anything, any time, for 22 of the 24 hours in the day."

While Ford won't reveal the exact figures, it says the system has already saved "substantial millions."

Ford dealers seem pleased with the new system.

"It's the greatest thing they ever did," says Joe Henry, parts manager for Universal Ford, Inc. in Long Island City, N.Y. While the system can't eliminate New York City traffic, he says, it has drastically cut down the number of orders that arrive with wrong or missing parts.

continued on page 64
Let your fingers do the stumbling

While the telephone has a decided edge in terms of installed base, in many ways it's still a lousy replacement for a computer terminal.

Voice response systems, which let callers interact with a computer by pressing buttons on a telephone keypad, are limited in their applications because telephones are so poor at entering text. For example, most systems require a caller to enter the letter "d" by dialing 3-1, which is the key hearing the letter D followed by its position on that key. Thus, keying in the word "cat" means pressing 2-3-2-1-9-1.

"Even typing in seven numbers, I often get one wrong," says John Phillips, president of Marine Information Services, an IS subsidiary of Stevedoring Services of America that operates a voice response system to keep customers apprised of the status of their shipments. "If I have to type 35 numbers, I know I'm going to get one wrong."

Another drawback is that voice response systems often require callers to listen to long menus and handle interruptions well. Fitting the right key at the wrong time can force the system into a loop of hard-to-escape error messages.

Finally, the telephone is limited by its need to have all information in spoken form.

Paul Gillin