LAW ENFORCEMENT ASSISTANCE ADMINISTRATION (LEAA)

POLICE TECHNICAL ASSISTANCE REPORT

SUBJECT

Phase I - Planning and Development of An Evaluation Design for the Area Regional Justice Information System Project

REPORT NUMBER

76-118/072

F O R

San Diego, California, Police Department

Population   : 770,527
Police Strength (Sworn):   1,389
Square Mile Area   :   313

CONTRACTOR

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DATE

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INTRODUCTION

The purpose of this report is to document an evaluation approach for the Area Justice Information System (ARJIS) project currently under development at the San Diego Police Department. The initial ARJIS project began in November, 1975, with the primary goal of developing an integrated and automated regional criminal justice information system to provide service to all law enforcement agencies in the San Diego region.

ARJIS was conceived in 1974 as the result of a feasibility study which recommended the regionalization of certain information in the San Diego region. The ARJIS approach deals with courts and corrections, as well as the law enforcement community in the region. The ARJIS project currently under development at the San Diego Police Department deals with the law enforcement related ARJIS applications only. The contents of this report deal with establishing an approach to evaluation of the law enforcement segment of the ARJIS project.

Evaluation Approach

The evaluation approach outlined in this report deals specifically with the long term accomplishments of each application in the project. There are nine different applications in the law enforcement portion of the ARJIS project. These are:

- Master Operation Index Application

- Crime Case Application

- Arrest Application

- Manpower Resource Allocation Application

- Crime Analysis Application

- Field Interrogation Application

- Automated Worthless Document Index

- Personnel Application

- Property Application

All applications except the Property Application are the subject of this report. The Property Application was excluded because it is being developed under another project effort even though it will become a pa' .f the ARJIS data bank after completion.

This report outlines an approach to the evaluation by establishing specific objectives under each application that can be quantified. The basic outline of the methodology is as follows:

Statement of Objectives:

- Base line Data to be collected

- Post implementation data to be collected

- Analysis technique

- Objective target quantification

- Actual Quantification measure

This outline will provide the ARJIS project team members with the basic tools to establish targets to measure success, document base line data to be used prior to the implementation of a new application, and a measure of actual results after the application has been implemented. This approach will provide measures of failure or success for each application to assist in the future modification or elimination of specific application features.

Persons Interviewed

The following local officials were interviewed and were of assistance in conducting the study:

San Diego Police Department

Capt. Carl Eckland
Lt. Jack McQueeney

City of San Diego Data Processing Center

Tom Lester
John Tsiknas
Dick Droll

San Diego Regional Criminal Justice Planning Board

Mark Wilson
Robert Polanski

On-site technical assistance was provided by the consultant during the period July 14, 1976 to August 6, 1976.

EVALUATION DESIGN

This chapter sets forth (1) objectives, (2) base line data to be collected, and (3) post implementation data to be collected for each component application of the Area Justice Information System. The analyses techniques and quantification measures are not identified because they will have to be determined by the project staff at a later date.

The intent of the evaluation design is to provide a basic framework to be completed by project resources. To complete each evaluation objective, specific studies must be designed and conducted. Additionally, the objectives listed in this report should expand or be modified as system development dictates.

Master Operation Index Application

Objective: Reduce space requirements for storage

Base line data to be collected:

- Physical measurement of space currently required for index system

Post implementation data to be collected:

- Physical measurement of space requirements of new system

Objective: Improve accuracy of alphabetical filing sequence of current files

Base line data to be collected:

- Sample accuracy of alphabetical filing sequence of current files

Post implementation data to be collected:

- Sample filing accuracy of automated file

Objective: Improve accuracy of data contained on record

Base line data to be collected:

- Sample data accuracy of current files

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Post implementation data to be collected:

- Sample of data accuracy of automated files

Objective: <u>Increase speed of retrieval for index data</u>

Base line data to be collected:

- Measure retrieval time from request to response in current system

Post implementation data to be collected:

- Measure retrieval time from request to response

Objective: <u>Increase accessibility to users</u>

Base line data to be collected:

- Document points of access to system (patrol car via dispatch, telephone direct to records, records counter, etc.) and average lapse time for users to travel to access points and obtain opinions of users

Post implementation data to be collected:

- Document points of access and average lapse time for user travel to access point and obtain opinions of users

Objective: <u>Provide for automated purging of outdated information</u>

Base line data to be collected:

- Document history data purge practices currently used in terms of time and resources utilized or storage space lost

Post implementation data to be collected:

- Measure file space savings and resources required to conduct automated purge

Objective: <u>Eliminate duplicate manual index files</u>

Base line data to be collected:

- Document redundant files and resources necessary to maintain data

Post implementation data to be collected:

- Document resource reduction related to files that have been eliminated

Objective: <u>Improve system security by installing an automated dissemination logging capability</u>

Base line data to be collected:

- Document logging practices currently utilized

Post implementation data to be collected:

- Document logging practices in new system

Crime Case Application

Objective: <u>Improve sequential file accuracy</u>

Base line data to be collected:

- Measure file accuracy in existing system

Post implementation data to be collected:

- Measure file accuracy in new system

Objective: <u>Reduce response time required to access case summary data</u>

Base line data to be collected:

- Measure time required to access existing file information from the point of request to response

Post implementation data to be collected:

- Measure time required to access new system summary data from the point of request to response

Objective: <u>Eliminate duplicate data capture of elements supporting crime case related systems</u>

Base line data to be collected:

- Document points of duplicate data capture in existing crime case related systems

Post implementation data to be collected:

- Document points of duplicate data capture in
  new crime case related systems

Objective: Eliminate redundant crime case related files

Base line data to be collected:

- Identify points of crime case file data
  redundancy in existing system

Post implementation data to be collected:

- Document points of crime case file redundancy
  in new system

Objective: Improve investigative crime characteristics search capability

Base line data to be collected:

- Survey investigative leads generated by current
  system and obtain opinions of users

Post implementation data to be collected:

- Survey investigative leads generated by new
  system and obtain opinions of users

Objective: Improve analysis capability of offender method of operation data

Base line data to be collected:

- Survey investigative leads generated by current
  system and obtain opinions of users

Post implementation data to be collected:

- Survey investigative leads generated by new
  system and obtain opinions of users

Objective: Improve security of criminal case file information through
establishing automated logging capabilities

Base line data to be collected:

- Document logging procedure used in current system

Post implementation data to be collected:

- Document logging procedures for new system

Arrest Application

Objective: Decrease time required to access arrest related information

Base line data to be collected:

- Measure retrieval time from point of request to response in current system

Post implementation data to be collected:

- Measure retrieval time from point of request to response in new system

Objective: Increase offender disposition information received from other criminal justice agencies

Base line data to be collected:

- Document disposition information that is received in the current system

Post implementation data to be collected:

- Document disposition information that is received in the new system

Objective: Provide the capability to search names that sound similar on an automated basis

Base line data to be collected:

- Document methods used for name search in the current system and identify the miss rate due to spelling differences

Post implementation data to be collected:

- Document miss rate using new system

Objective: Provide the capability to purge arrest related information from active files on a scheduled basis

Base line data to be collected:

- Identify current method for purging historical arrest related data and time requirements for review and purge

Post implementation data to be collected:

- Document time requirements for review and purge in the new system

Objective: <u>Decrease time required to access juvenile information</u>

    Base line data to be collected:

        - Document time required to access juvenile
          information using current system

    Post implementation data to be collected:

        - Document time required to access juvenile
          information using new system

Objective: <u>Increase arrest file data accuracy</u>

    Base line data to be collected:

        - Document arrest file accuracy in existing
          system

    Post implementation data to be collected:

        - Document arrest file accuracy in new system

Objective: <u>Improve arrest sequential filing accuracy</u>

    Base line data to be collected:

        - Document sequential filing accuracy in
          current system

    Post implementation data to be collected:

        - Document sequential filing accuracy in
          new system

<u>Manpower Resource Allocation Application</u>

Objective: <u>Reduce average patrol car response on time critical calls</u>

    Base line data to be collected:

        - Document patrol car response time in
          existing system

    Post implementation data to be collected:

        - Document patrol car response time in
          new system

<u>Objective</u>: <u>Increase deployment effectiveness for prevention</u>

Base line data to be collected:

- Document crime rate in a select geographical area
prior to system assisted preventive deployment

Post implementation data to be collected:

- Document crime rate in test area after preventive
deployment

<u>Objective</u>: <u>Allocate manpower to more directly relate to workload</u>

Base line data to be collected:

- Document workloads and deployment practices under
existing system

Post implementation data to be collected:

- Document workloads and deployment practices under
new allocation system

<u>Objective</u>: <u>Reduce the average travel distance to calls</u>

Base line data to be collected:

- Document average travel distance to calls under
existing system

Post implementation data to be collected:

- Document average travel distance to calls under
new deployment system

<u>Objective</u>: <u>Reduce the frequency of patrol cars required to leave assigned
patrol cars to cover calls in another area</u>

Base line data to be collected:

- Document frequency of calls handled outside of
assigned area in present system

Post implementation data to be collected:

- Document frequency of calls handled outside of
assigned area under new allocation system

Objective: <u>Reduce time from receipt of request for field contact to dispatch of car</u>

Base line data to be collected:

- Measure time lapse from call receipt to dispatch in current system

Post implementation data to be collected:

- Measure time lapse from call receipt to dispatch in new system

Crime Analysis Application

Objective: <u>Increase investigative leads through matching method of operation data with current offenses</u>

Base line data to be collected:

- Document investigative leads produced by current criminal analysis system

Post implementation data to be collected:

- Document investigative leads produced by new system

Objective: <u>Increase the number of crime patterns discovered</u>

Base line data to be collected:

- Document the number of crime patterns discovered using the present system

Post implementation data to be collected:

- Document the number of crime patterns discovered using the new system

Objective: <u>Increase amount of information dealing with security considerations for the design of residential communities and commercial developments</u>

Base line data to be collected:

- Document planning information dealing with security

Post implementation data to be collected:

- Document planning information dealing with security provided by the new system

Objective: <u>Improve capability to measure the results of crime-specific prevention or suppression programs</u>

Base line data to be collected:

- Document crime-specific analysis capability under current system

Post implementation data to be collected:

- Document crime-specific analysis capability provided by new system

Objective: <u>Improve the capability to support the manpower allocation system in the deployment of prevention suppression task force</u>

Base line data to be collected:

- Document amount of crime analysis data that is input to the present manpower allocation system

Post implementation data to be collected:

- Document amount of crime analysis data that is input to the new manpower allocation system

Objective: <u>Improve capability to provide information on projected levels of offender activity and to identify future problem areas</u>

Base line data to be collected:

- Document capability under present system

Post implementation data to be collected:

- Document capability under new system

Field Interrogation Application

Objective: Reduce officer field time necessary to fill out field
interrogation document

Base line data to be collected:

- Document officer time spent entering data
  on existing field interrogation document

Post implementation data to be collected:

- Document officer time spent entering data
  on new system

Objective: Reduce lapse time from field data capture to field interrogation
entry

Base line data to be collected:

- Document lapse time from data capture to
  update in the current system

Post implementation data to be collected:

- Document lapse time from data capture to
  update in new system

Objective: Reduce inquiry response time to field interrogation file

Base line data to be collected:

- Document time lapse between inquiry and
  response in existing system

Post implementation data to be collected:

- Document time lapse between inquiry and
  response in new system

Objective: Reduce time required to provide investigative divisions with
relevant field interrogation information

Base line data to be collected:

- Measure time lapse between field data capture
  and receipt by investigative divisions in
  existing system

Post implementation data to be collected:

- Measure time lapse between field data capture and receipt by investigative divisions in new system

Objective: <u>Reduce decentralized storage of field interrogation information</u>

Base line data to be collected:

- Document decentralized files which contain field interrogation data in current system

Post implementation data to be collected:

- Document decentralized files which contain field interrogation data in new system

Automated Worthless Document Index

Objective: <u>Reduce duplication of investigations related to a single suspect in the areas of forgery and worthless documents</u>

Base line data to be collected:

- Document areas of duplication under the current system

Post implementation data to be collected:

- Document areas of duplication under the new system

Objective: <u>Reduce the decentralization of worthless documents and forgery files</u>

Base line data to be collected:

- Document points of duplicate storage of files in current system

Post implementation data to be collected:

- Document points of duplicate storage of files in the new system

Objective: <u>Increase the rate of warrants served on forgery and worthless document suspects</u>

Base line data to be collected:

- Document warrant service rate on existing system

Post implementation data to be collected:

- Document warrant service rate on new system

Objective: <u>Increase the rate investigative leads provided by the worthless documents system</u>

Base line data to be collected:

- Document rate of investigative leads provided by the worthless documents system

Post implementation data to be collected:

- Document rate of investigative leads generated by the new system

Objective: <u>Reduce the errors in the sequential filing order of forgery and worthless document files</u>

Base line data to be collected:

- Document filing error factor in present system

Post implementation data to be collected:

- Document filing error factor in new system

Personnel Application

Objective: <u>Reduce the cost of generating periodic reports concerning the status of police personnel</u>

Base line data to be collected:

- Document costs required in current system to generate status information

Post implementation data to be collected:

- Document costs required to generate status information in the new system

Objective: <u>Improve the availability of police personnel status and history information</u>

Base line data to be collected:

- Document availability of information in current system

Post implementation data to be collected:

- Document availability of information in new system

Objective: <u>Reduce redundant files maintained on police personnel</u>

Base line data to be collected:

- Document redundant files under current system

Post implementation data to be collected:

- Document redundant files under new system

Objective: <u>Increase accuracy of data contained in police personnel files</u>

Base line data to be collected:

- Measure accuracy of data in files of current system

Post implementation data to be collected:

- Measure accuracy of data in files of new system

END