

267

EVALUATION REPORT

MIAMI POLICE DEPARTMENT
VIDEOTAPE RECORDER SYSTEM
FOR IDENTIFICATION AND TRAINING

A DEMONSTRATION PROJECT

DEVELOPED UNDER GRANT FROM
UNITED STATES DEPARTMENT OF JUSTICE,
OFFICE OF LAW ENFORCEMENT ASSISTANCE

NC 5001187

Report by

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FOREWORD

This is the final evaluation report on Grant #267-S-0640 by the United States Department of Justice, Office of Law Enforcement Assistance to the City of Miami, Department of Police, for a Videotape Recorder System for Identification and Training. This report will contain certain materials which were in the first evaluation report since it is the feeling of the Evaluator that this final report should be in such form that all, or parts of it, could be readily reproduced and disseminated to law enforcement agencies which may desire to establish their own video systems.

It will therefore be a complete description of the Miami Videotape Project and its history. It will describe the early defects discovered, and set forth the steps taken to overcome these. It will include also comments as to additional items which might be considered for further improving the existing system.

The Evaluator readily admits that he has been unable to maintain a completely impartial and objective attitude toward the Videotape Project since, as he has seen the project develop and has come to realize its potential, he regards it as one of the great advances in scientific law enforcement in recent years, and is a most enthusiastic supporter of the use of Videotape in police work. There are others who share this feeling and enthusiasm, since this project was selected as a winner in the American Express Company--International Association of Chiefs of Police awards for significant advances in scientific law enforcement in the period 1963-1968. This award was announced October 9, 1968 at the Convention of the International Association of Chiefs of Police held in Honolulu.

In reviewing this report, it must be kept in mind that this was a demonstration project--the first of its kind--and it was expected that problems would arise and have to be corrected, or changes made in equipment, as experience dictated that improvement was desirable in certain areas.

It is the sincere hope of all who have worked on this project that police departments throughout the nation will be able to profit from the Miami Police Department's experience and install their own videotape systems with a minimum of problems and at the least expense for the system desired. Any law enforcement agency desiring assistance or advice in establishing a video system need only to contact the Miami Police Department, and the assistance will gladly be rendered.

It is appropriate to mention here that the monetary portion of the American Express Company--International Association of Chiefs of Police award has been placed in a special fund to improve the Miami Police Videotape System and to assist other police departments in setting up their video systems.

In any evaluation of the Miami Police Videotape Project, it is necessary to recognize the contributions of various persons who have been instrumental in the origin, growth, and development of the system. Among these are:

Walter E. Headley, Chief of Police, who recognized the value of the system from its inception and who has given it his wholehearted support and cooperation, and without whose backing it could not have achieved such results;

Major Adam Z. Klimkowski, Commander, Training Section, who originally conceived the idea of applying for a grant for a video system and whose advice and counsel have been invaluable;

Joseph J. Musial, Supervisor of Records and Identification, under whose direction the system has been set up and developed, and who was quick to recognize the ability of video to provide a better means of visual and aural identification;

W. Lloyd Hicks, former Identification Technician, who performed so much of the actual work in setting up the video system, and who devoted so many hours to working out the technical problems which were bound to arise in the inauguration of such a project;

Mark Nachman, who is now the technician in charge of the operation of the video equipment and is ably carrying out the work commenced by Mr. Hicks;

Special recognition is also given to the late Oran E. Caudell, Assistant Chief of Police for Administration, who, until his untimely passing in the midst of this project, had most capably handled the administrative and fiscal details of the Grant.

Your Evaluator wishes to express his personal appreciation to the Office of Law Enforcement Assistance, United States Department of Justice, the Miami Police Department, and to the many individuals connected with this Grant. The spirit of cooperation, harmony, and the desire to do a job which would professionalize and benefit law enforcement made the Evaluator's task uncomplicated and a real pleasure.

HISTORY OF PROJECT

The application of television to police work is no rarity. However it has only been in recent months that the feasibility of using videotape recording was achieved. The prohibitive costs of the complex video recorders used by the television industry prevented their use in police applications, as did the necessity of having skilled technicians to operate and maintain them.

The recent development of a video recorder with helical scan format has reduced the cost drastically, making possible their use in many applications never before practical. Many audio-visual applications produced in the past by motion picture film can now be done with video recorders at a substantial cost reduction.

Past television applications to police work were limited mostly to live closed circuit monitoring. With the advent of the low-cost, helical scan video recorder, new ideas and methods never before utilized have become realities. With knowledge of this, Major Adam Z. Klimkowski of the Miami Police Department conceived the idea of using video recording as a supplement to the usual identification procedures. The idea was to make walking, talking likenesses of arrested persons a part of their identification records, utilizing videotape and the "instant replay" technique so familiar to TV sport fans. Major Klimkowski, working with Mr. Joseph J. Musial, Supervisor of Identification and Records, developed the basic idea for the present video system.

Under date of February 28, 1966, the City of Miami made application to the United States Department of Justice, Office of Law Enforcement Assistance, for a grant for a Videotape Recorder System for Identification and Training, asking that funds be made available for such project. It was contemplated the project would be of twelve months' duration from July 1, 1966 through June 30, 1967. The necessary forms were executed, and under date of July 20, 1966, a Grant Award in the amount of \$15,595.00 was made. Specifications were drawn and bids solicited for the equipment necessary, and finally after certain delays in de-

livery and installation, the Project became operational on December 19, 1966.

After twelve months of operation under the original grant, a request was made for a supplemental grant to obtain certain additional equipment. A supplemental grant was made dated December 8, 1967 to run to May 31, 1968, in the amount of \$5,583.00. The total amount of both grants came to \$21,178.00, of which \$18,928.00 was for equipment.

OPERATION OF SYSTEM

Bids were solicited under date of September 1, 1966 for the following equipment:

<u>Quantity</u>	<u>Description</u>
1	Closed Circuit Television Recording/Playback Console complete with Video-Audio Tape Recorder, Reproducer, TV Tuner, 9" Video Monitor, Transistorized Vidicon Camera with 3-lens turret, 12.5 mm lens, 25 mm close-focus lens, 50 mm lens, 75 mm lens, heavy duty tripod, audio amplifier/speaker, microphone, cabling and switching facilities, test pattern videotape, and contained in a mobile, roll-around console-Ampex Model 7100 Videotrainer system or equivalent--together with all necessary cable and connectors for installation of the equipment being offered into a complete system for the Municipal Justice Building, City of Miami, Florida.
1	Compact, portable, closed circuit Videotape Recorder. Ampex Model 7000 Recorder or equivalent.
2	Transistorized Vidicon Closed Circuit Television Camera. Ampex Model CC-324 Vidicon Camera or equivalent.
6	Standard 23" Table Model Television Receiver, Zenith. Model X-230LY or equivalent.
33	Recording Tape for the above-listed recorders. Ampex series 1147 Videotape or equivalent.

The Items supplied under this Bid had to be capable of being assembled into a single complete system. Inter-changeability of the recording equipment had to be guaranteed by the Manufacturer.

Bids were opened on September 21, 1966, and Goddard Electronics of Miami, Florida (Meco A/V) was the successful bidder in the amount of \$12,494.50, supplying the Ampex equipment as listed in the bid solicitation--though supplying only 10 tapes initially, 23 additional tapes being purchased later--bringing the cost to \$13,873.35 for the basic original equipment obtained.

The Ampex Corporation of Chicago, Illinois, manufacturers of the Video equipment, have been vitally interested in the success of this project. As a substantial demonstration of this interest, Ampex Corporation early in the project paid the full expenses for a representative of the Miami Police Department to travel to Chicago and spend a week at the Ampex plant, receiving training in the technical aspects and operation of the equipment. Ampex has also offered any additional assistance or technical advice that may be necessary.

The room selected to be used as the video-recording studio is a square room approximately 16' x 16' with a 10' ceiling. There are plaster walls and a white acoustical block ceiling. To improve the acoustical qualities of the room and to give a neutral background for the picture, ceiling-to-floor drapes in a pale blue color were hung on the complete back wall and on one complete side wall. The audio quality of the system utilizing the stock microphone furnished and mounted on a floor stand has been found to be quite satisfactory. Although there are certain disadvantages and dangers in the use of this type microphone (which will be discussed later), it is still being used since it has proven the most satisfactory of those tested.

In the studio are located the Ampex videotape recorder console, Model 7100, with 9" recording monitor, vidicon camera, play-back unit, and a 23" viewing monitor. All the identification recording has been carried out in this room.

From December 19, 1966 through September 30, 1968, 7061 persons were recorded, using 107 reels of videotape. Each tape runs a total of 60 minutes,

and an average of 66 persons have been recorded on each tape. All persons arrested by the Miami Police Department, except traffic cases and drunks, are recorded on the videotape. Of the 7061 run, there has been no serious objection to the taping raised by any of them. The prisoners all seem to accept this as part of the routine booking procedure, and they are treated and handled so as to impress upon them that this is exactly what it is.

When a prisoner is brought into the Miami Police Department, he is taken to the booking desk where his arrest is recorded. He is next finger-printed and still mug shots are taken. He is then taken to the video studio, which is only a very short distance down a corridor from the booking desk. A sign on the studio door identifies the room as "Video Identification." The prisoner enters the room and is asked to stand on a pair of footprints painted on the floor, and to face the camera. The studio lights are brought up to recording intensity gradually so as to avoid eye squint by the person being photographed. When the recording begins, the operator asks the prisoner a series of questions as to his name, age, date and place of birth, height, weight, color of hair, color of eyes, and residence. The prisoner is then asked to point out any visible scars, marks, or tattoos, and to describe them. He is then requested to face slowly to the right and then to the left. This completes the recording. The procedure is treated purely as an identification matter, and no questions are asked as to the reason for arrest or charges against the prisoner since it is not desired to include anything which might later keep the tape from being used in court for identification purposes. The picture is recorded against the draped background, and purposely there is no scale on the wall to indicate the person's height, nor is there any identification number around his neck. It was felt to be highly desirable from a legal standpoint that there be nothing in the video recording to indicate that the person was under arrest or in custody--that the whole process was solely identification.

Every person video-recorded is assigned a Bureau of Identification number and folder. Stamped on the face of the folder is the reel number, the starting and ending footage of the tape, and date and name of the operator. This information readily locates the subject on the tape since a meter on the recording

console indicates how much tape has been run.

Two 23" viewing monitors are located in the Roll Call room. One is located in the Criminal Investigations Section (Detective Bureau), and another in the Police Academy. During the early phases of the Project, three times each day at Roll Call as the shifts changed, the tape on persons arrested during the previous 24 hours was shown to the officers and detectives coming on duty.

Beginning May 13, 1968, a new type of familiarization program was inaugurated. A tape was made of six subjects or suspects in a particular crime category and was shown several times at each Roll Call for a period of one week. The first showing was of burglars. It was followed by fugitives and wanted persons, swindlers, and con men, and then by robbers. This was found to be a much more effective type of familiarization program than a mere review of those arrested the previous day. If it is felt desirable, the tape can also be shown to any classes in session in the Academy.

PROBLEMS AND SOLUTIONS

When the Video System first went into operation, it quickly became apparent that certain modifications and changes were necessary. These should be discussed at this point before the current utilization and results are pointed out. The remedies to the problems encountered must be looked upon as one of the most valuable achievements of the project since other law enforcement agencies can now avoid the expense and trouble which Miami encountered.

At the expiration of the original Grant, the Office of Law Enforcement Assistance saw the necessity for the changes which will be discussed, and provided the funds necessary for the modifications and improvements to bring the system to its present state.

The Supplemental Grant was made December 8, 1967, and bids were solicited shortly thereafter. Meco A/V, who supplied the original equipment, was the successful bidder in the amount of \$4,833.00 for the following equipment:

EQ-3, Colortran lighting system (previously installed on trial basis;)

2 25-100 mm Canon Zoom lenses f1.8;

3 Panasonic 9" monitors;

1 Spot microphone and 1 lavalier microphone;

1 heavy duty Quickset tripod with dolly and head;

1 portable power inverter--Torado;

a fast forward modification to the 7100 recorder;

1 processing amplifier;

1 tape splicer

When bid specifications were being drawn, assurances were given by the suppliers and potential bidders that the lighting already installed in the room would be completely adequate. These fixtures were standard ceiling-type fluorescent lights of good intensity. When the Video equipment was placed in operation, it quickly became apparent that the lighting was entirely inadequate. Standard room lighting, even if of above-average intensity and in a room with white ceiling and light-colored walls, is simply not suitable for Video studio purposes. The picture was not of the quality necessary for identification. Another problem arising was the fact that the Video camera and the fluorescent lights both

operated on 60-cycle A/C current, producing a cycling effect or beat in the recording.

This problem was solved with the installation of Colortran quartz lighting system Number EQ3 (GK). It was also deemed advisable to control the level of the lights to produce the best possible picture and to avoid eye-squint by the subject. For this reason, power-pack dimmers and remote-control switches were added. The total cost of complete studio lighting equipment was \$1,747.23.

The vidicon cameras originally purchased were the industrial type having a turret-type lens board, offering a choice of three different lenses--wide-angle, normal, and telephoto. When the equipment was placed in operation, it was quickly determined that this arrangement was impractical and resulted in a waste of tape and loss of continuity, as lenses were changed during recording with resultant necessary re-focusing and aperture adjustment. Because of this, only a medium close-up picture was being taken during the first year of operation. Zoom lenses for the cameras should have been specified and are a must for this type of operation. With zoom lenses, the studio camera can record an overall picture of subject, medium close-up of features, and move smoothly in to view close up any scars, marks, or tattoos. This can all be accomplished with no turreting, adjusting, or stopping. The extra cost of a zoom lens is soon paid for by the savings in tape which is lost by a turret-type of operation. The zoom lens accomplishes much more satisfactory results.

It must be stated, however, that the picture quality under studio conditions was very good, for each of the lenses on the turret board and the vidicon cameras is capable of recording an image most suitable for identification purposes. A zoom lens is much more versatile and economical, it being well established that a zoom lens gives picture quality at least equal to, and probably better than, a fixed length lens.

From the Supplemental Grant, the Miami Police Department was able to obtain two Canon 25 mm - 100 mm, f1.8 zoom lenses at a cost of \$450.00 each. These have been a tremendous asset to the operation and results of the system.

The original vidicon cameras had no monitoring device or viewfinder for aperture adjustment, focusing and framing. Viewfinders were not available in cameras of the type purchased at the time the cameras were bought. Due to the absence of a viewfinder, the operators used the console monitor in the studio for focusing, aperture-setting, and framing. This can be satisfactory under controlled studio conditions where the console is adjacent to the camera and the camera can be adjusted while viewing the monitor. However, there was no console monitor for the portable unit and the operator did not know what he was recording.

In April 1968, it was possible to exchange the two original Ampex Vidicon cameras, plus two new Panasonic monitors which had been purchased, plus the monitor mounting boards for two new Panasonic Viewfinder Vidicon cameras, Model WV-350-P. This exchange was made by the supplier who originally furnished the video system and who was also the successful bidder under the Supplemental Grant. The exchange was made at no cost to the City of Miami, although the value of the Panasonic Viewfinder cameras is \$900.00 each.

In considering the problems involved in using portable units outside the studio and in remote locations, the question of a power source became pertinent. It was obvious that 110 volt, 60-cycle A/C might not be available at crime scenes and it would be necessary to furnish an independent power source. The Miami Police Department operates three mobile crime laboratory units, and these units will be modified in the near future so any of them can readily accommodate a portable recording console. Each of these units, therefore, should have an inverter designed to change 12-volt auto battery current to 110-volt, 60-cycle current which is frequency-stabilized for use with video equipment. Mecro A/V loaned such an inverter for test purposes, which worked very well. This inverter costing \$279.00 was purchased out of funds supplied in the Supplemental Grant. Others will be purchased by the City of Miami.

Several training tapes have been made utilizing the studio facilities to record them. One particularly good tape on the subject of gambling schemes and gambling devices was produced during the early days of the project. This very

graphically portrays the schemes in a 40-minute presentation, contrasted to the several hours of lecture or several years of experience which would be required for an officer to become familiar with these. Other tapes on a variety of subjects are planned. A series of short tapes termed "visual training bulletins" on use of the police baton are in the process of production.

In the gambling tape, the material presented was excellent. However, one camera was used and shots were all head-on with the camera roughly panned to the various exhibits or illustrations when appropriate. Thus the camera work was monotonous and there was no variety of camera angles or distances. Because of this, the viewer's interest tends to wander. If the system was to be used in producing training tapes, the need for more than one camera became quite evident. Additional cameras would not have to be procured since the present cameras could be used. However, a multiple camera control system would be necessary with a special effects generator (switcher/fader) and external sync-generator. The identification aspects of the project also would be greatly improved by use of a multi-camera system. The original estimates on this equipment indicated they would be quite expensive, and they were not approved in the Supplemental Grant. In the meantime, Panasonic brought out a new sync-generator and special effects generator which the Miami Police Department was able to purchase for \$860.00. This was a fraction of the cost of similar units previously available.

When the system was planned, no consideration was given to the fact that video cameras require a special type of tripod. This was not specified in the original bids, and the equipment furnished came with one still camera-type tripod. It is a good tripod for a still camera, but it is impossible to raise it smoothly, lower it, pan with it, change angles, or position it during recording. Funds from the Supplemental Grant were used to purchase a Quickset, heavy duty, video type tripod with dolly and head at \$465.00. This has vastly improved the operation and capability of the system.

In the original bids, no thought was given to including a splicer for the videotape. This is a very necessary piece of equipment since tapes will occasionally be broken, and also on occasions it may be necessary to cut tapes for editing purposes or to make special purpose tapes. Hand-cutting and hand-splicing gives very rough results. A videotape splicer was obtained as part of

the Supplemental Grant at a cost of \$85.00.

As mentioned earlier in this report, an omni-directional microphone mounted on a floor stand is used in the video studio. The audio quality is very good, and voices of the subject and the operator questioning the subject both record well and in a balanced manner. However, it is recognized that there is a potential danger in that the prisoner might attempt to use the microphone and stand as a weapon to damage the video equipment or to injure the operator. In an attempt to overcome this danger, a directional spot microphone was purchased from the Supplemental Grant. It was mounted on the ceiling over the video camera and aimed at the subject. This arrangement was not satisfactory since the microphone picked up a roar from the air-conditioning system and a rumble from a generator operating outside the building nearby, making the audio quality unsatisfactory. Fastening the original microphone stand permanently to the floor was not feasible since it, on occasion, must be moved when making training films or for remote recordings. Consideration is now being given to constructing a railing topped with shatterproof glass as a protection to the equipment and to the operator.

One of the important values of videotape is the ability to duplicate portions of the tapes and thus build up video modus operandi files, or prepare tapes for review by witnesses. This is done by using the video/audio output of one recorder as the input source to another recorder. However, in order to maintain a quality transfer electronically, it was necessary to secure a processing amplifier. This unit cost \$800.00 and was purchased from the Supplemental Grant.

In duplicating tapes, the location on the original tape of the material to be duplicated may be time-consuming unless there is some arrangement for rapid running and review of the tape. This was accomplished by a fast forward modification to the 7100 recorder at a cost of \$100.00 provided in the Supplemental Grant.

UTILIZATION AND RESULTS

As discussed earlier, as of September 30, 1968, 7061 arrested persons have been recorded. From this source modus operandi files have been constructed on robbers, burglars, and swindlers and con-men. These files will continue to grow and their value will increase as more persons are recorded and then added to the file in their criminal speciality.

In these days of quick and ready bail, it frequently happens that a live line-up is not possible because the suspect is released before witnesses can be gathered and brought in to view him. There are also recent court rulings which place certain restrictions on live line-ups. Video recording overcomes these problems in an entirely ethical and legal manner.

In utilizing videotape recordings for viewing by witnesses or victims, it is not treated as a line-up or referred to by that terminology. It is strictly an identification matter. It is called a "Video Review" and is handled in the same manner as a review of flat mug shots by a victim. If a special tape is desired for video review, the recording of the suspect is copied onto a tape with at least six others of the same general description. Those who view the tape do so individually and not in a group. They are told just to watch the video picture as it is shown on the monitor. They are asked to note on a card or to indicate to the operator if they recognize or can identify any of those shown. If there is more than one witness, they are cautioned not to discuss whether they identified anyone or which one it might have been.

Video reviews have been utilized with a remarkable degree of success.

In the Spring of 1967, the Miami Police received a number of separate complaints of a confidence game involving color TV sets. Several weeks before, two suspects had been arrested on other charges and released. A video review tape was prepared for viewing by witnesses. Eight positive identifications resulted, solving five cases, and in two of these, the victims had failed to pick out suspects from mug photographs.

There have been a number of robbery cases where the victim has been unable to make an identification from mug photos but where positive identification has been made from a video review.

On January 7, 1968, Ike Macy, nationally known tennis professional, was shot and killed by robbers at his home. Mrs. Macy was wounded. While Mrs. Macy was in the hospital, portable video equipment was taken to her hospital room and she was shown a video review from which she made a positive identification of those who killed her husband and wounded her.

During the summer of 1968, a Federal Agency had seven unsolved bank robbery cases all apparently committed by the same 3-man gang. Three suspects were developed, all of whom had been previously arrested and videotaped by the Miami Police. A video review tape of thirteen persons of similar descriptions was prepared the three suspects interspersed among ten other persons on the tape. The tape was viewed at various times by 21 witnesses who had seen the bank robbers during the holdups. Each of the 21 witnesses positively identified all three of the suspects from the video review. This occurred in spite of the fact that a number of the witnesses had been unable to identify mug photos of the same three.

Although the cases just cited portray the value and uses of videotape, probably the most significant use of the system was in the case involving Emmett James Paramore. On May 3, 1967, Paramore and three others were looting a bakery truck while the driver was making a delivery inside a store. The driver returned, and in an ensuing struggle was shot and killed by Paramore. He was arrested several days later and admitted the shooting. The questioning and confession of Paramore to Miami Police was recorded on videotape. On February 28, 1968, during Paramore's trial, the videotape confession was shown to the jury despite vigorous defense objections. Judge David Popper had viewed the tape and had heard defense arguments prior to ruling on the admissibility. On February 29, 1968, the jury found Paramore guilty with no recommendation of mercy, making death sentence mandatory. Since the precedent of admissibility in Florida courts has been established, the Miami Police is seeking additional cases where videotape can be utilized in court.

Another interesting and valuable use of videotape occurred during the Republican National Convention at Miami Beach in August 1968. A Government security agency made extensive videotape recordings of out-of-town agitators who were demonstrating and picketing outside the Convention. These recordings were made on Sony portable video equipment. The Sony tapes were dubbed onto Ampex tape at the Miami Police Department and were very useful in identifying those who were inciting and leading racial disturbances which occurred in Miami at the latter part of the Convention.

COST FACTORS

The total expenditure under this Grant for the complete system as it now exists has been \$18,619.00, which included 33 reels of tape. With the exception of tape at a cost of \$59.95 for a 60-minute reel, the operating costs of the system are negligible. Electrical consumption is low and the only other direct cost is for a log kept of persons recorded.

From the beginning of the project on December 19, 1966 through September 30, 1968, 7061 persons were recorded using 107 reels of videotape at \$59.95 each. An average of 66 persons have been recorded on each reel at a cost of 91¢ per recording. There is no further processing cost; the recording is permanent; and the picture is available for "instant replay." A recording is checked immediately after it is made, and should there be any fault, it can be erased and redone before the subject leaves. This means that each recording is of good quality and at no additional cost.

There are other expenses, of course, which must be taken into consideration. Among these are \$400.00 per year for repairs and maintenance. There are also the salaries of the personnel who operate the equipment. It is estimated that the operation and support of the videotape system requires one-fifth of the time of the Supervisor of Identification and Records, one-fourth the time of an Identification Technician II, and one-fourth of the time of 4.2 Identification Technicians I. This would total \$11,782.80 in personnel services per year at the present Miami Police Department salary scale.

Although the total expenditures to date for equipment have been over \$18,000, it is estimated that the Miami system could be reproduced by another police department for about \$15,000, since they would benefit by newer, less expensive equipment and by Miami's experience.

FUTURE UTILIZATION

The Miami videotape project has spurred the imagination of all those associated with it. This has resulted in many ideas and much speculation as to the future utilization of videotape for identification. Some of the current thinking, developments, and concerns will be pointed out.

The next most obvious step in video recording will be color. This is perfectly feasible now from a technical standpoint, but the cost of color video at present makes it impractical for a police department to use color video. However, with the rapid and continuous improvement in equipment and the reduction in cost, it is reasonable to expect that in a short span of years, color video recording equipment will be within the budget potential of most major police departments.

Micro-wave transmission and coaxial cable transmission of audio and video signals have been widely used in commercial TV for many years. They could easily be utilized to transmit video identification material from one police department to another. Here again, however, cost factors make the use of such transmission methods impractical, and the specialized equipment necessary would restrict the use of these media.

To overcome these problems, technicians of the Miami Police Department have been experimenting with transmission of the video and audio signals over ordinary telephone lines. Using a specially modified monitor set, it has been possible to place a phone call from the Video Identification studio to any one of a number of remote locations in the Miami Police Department Building. When the phone connection is established, the monitor is hooked into the phone outlet with alligator clips. The playback console is tied in with the processing amplifier to boost the signal and then hooked to the phone wires in the studio and the signal is transmitted to the monitor in the remote location. A good picture has been received on the monitor at the remote locations. There is still some further developing to be done with this technique, but it appears to offer

great potential for cheap transmission of signals to remote locations.

New York State Identification and Intelligence System, a State law enforcement agency, is doing research on factors which affect recognition and identification. The actual work is being performed by scientists on the staff of Cornell University. In furtherance of their research, two of these gentlemen visited Miami to observe and study the videotape system in operation. They remarked that their studies to date would seem to indicate that voice and motion are the two key factors in identification. Their findings are confirmed and reenforced by the numerous instances where witnesses have been unable to make an identification from mug photos but have readily identified persons when they observe a videotape recording of an individual. If continued research further confirms these findings, videotape for identification would of necessity become part of the identification process of all progressive law enforcement agencies.

Another future avenue of identification has been opened through the work of Dr. Lawrence Kersta of Voiceprint Laboratories. As the voiceprint technique becomes more widely accepted, it offers many interesting possibilities and applications involving the audio portion of the videotape system.

Of concern to those involved in the project has been the apparent proliferation of video equipment and systems which are beginning to appear in various law enforcement agencies. With video systems in police departments throughout the United States, a new medium could be developed for interchange of information. However, the police agencies must now--while video is in the infant stage--agree on a format to insure compatibility of recorded tapes. Basically, it is believed desirable that a one-inch, helical scan system with a recording speed of 1000 ips be adopted. This will permit modification of present black and white equipment to utilize color at some future time and will permit black and white tapes to be run on the color playback units, since color recording and playback will be at 1000 ips. A Committee of the International Association for Identification has been established to work on this problem and to recommend standards for videotape systems.

There appears to be little doubt as to the value of video identification. It is believed that in the near future exchange of video information will be handled in much the same fashion that other record and identification information is exchanged.

CONCLUSIONS

It is the Evaluator's conclusion that Videotape for Identification and Training as utilized by the Miami Police Department is a giant step forward in modern progressive, scientific law enforcement. Its value has been amply demonstrated in the many instances where witnesses and victims were able to make identifications after viewing videotape when they had been unable to do so from mug photos. The videotapes shown to all officers at Roll Call have been most helpful in assisting the officers to become acquainted with the notorious persons in various criminal categories. The acceptance in court of a videotape confession set a new precedent in Florida legal history.

The personnel of the Miami Police Department have approached the Videotape project in a highly professional manner and have avoided any controversial or highly spectacular use of the equipment. It has been developed and utilized in a rather conservative but none the less well thought out and soundly conceived manner. Great care was taken to assure that legal or ethical considerations did not arise which might make video identification unacceptable to the courts or to the public. All those associated with the project devoted time, thought, and energy to it far above that which would normally be expected of them. The results obtained reflect their enthusiasm and effort.

The personnel of the Miami Police Department--from the Chief of Police on down--have recognized that a great responsibility was placed on them when this Grant was awarded and that it was incumbent upon them to fully utilize the equipment, to assign sufficient personnel to the project to realize the equipment potential, and for the City of Miami to bear its share of the cost of developing and operating the Videotape System. It was also recognized that developmental and experimental work would have to be performed and done in an imaginative and innovative manner. And it was further recognized that the results of the Miami Police Department's work would have to be readily and cheerfully available to other law enforcement agencies. Although the work under the Grant has been completed, the equipment will continue to be fully utilized and

and the experimental and development work will continue.

It is the Evaluator's conclusion that the Miami Police Department has met its responsibilities under the Grant and has demonstrated that videotape is a valuable and feasible supplement to police identification. It is also a training aid of great worth. The work done by the Miami Police Department will benefit any other Police Department which embarks on a videotape system. Miami made mistakes and corrected them, and this experience will be available to any agency that wishes to avail itself of it. It would appear that a Police Department could set up a videotape system in a compatible format for as little as \$2500.00, or a complete sophisticated system comparable to Miami's could be established for about \$15,000. The Miami system is sufficiently versatile in its present form to meet nearly any use which a law enforcement agency might call upon it to fulfill.

The Evaluator feels the Miami Police Department and its personnel should be commended for the results they have produced under this Grant.

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