COMMITTEE REPORT

SENATE

4/27/82

FURTHER: None

Date: 5/11/82

Mr. President:

The Committee on FINANCE has had CSHB 344(Fin.)

making a special appropriation to the Dept. of Public Safety for a computerized fingerprint system

under consideration and (a majority of the committee) (the committee) reports it back with the following recommendations:

[X] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[ ] replace with CS for _____ [ ] same title [ ] new title

and recommends _____

[ ] AND attaches a "Letter of Intent" [X] ~~New~~ NO Fiscal Note

[ ] reports it back without recommendation

[ ] referred to the _____ Committee

MEMBERS SIGNING
DO PASS

MEMBERS HAVING
OTHER RECOMMENDATIONS:

_____

CHAIRMAN

S 60 (Rev. 12/78)

Original sponsors: Anderson, Adams, Grussendorf, et al

Offered: 1/29/82
Referred: Rules

Funding Information

General Fund	$2,718,200
Other Funds	-0-
	$2,718,200

IN THE HOUSE BY THE FINANCE COMMITTEE

CS FOR HOUSE BILL NO. 344 (Finance)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Public Safety for a computerized fingerprint system; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $2,718,200 is appropriated from the general fund to the Department of Public Safety for a computerized fingerprint identification system.

* Sec. 2. The appropriation made by this Act is for a capital project and is subject to AS 37.25.020.

* Sec. 3. This Act takes effect immediately in accordance with AS 01.10.-070(c).

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. CS HB 344 (Finance)
Title Special Appropriations for a computerized fingerprint system.
Requested by _____ Date _____

II. FISCAL DETAIL
Agency Affected Department of Public Safety
Program Category Affected Administration of Justice
BRU, Program, Or Subprogram(s) Affected Laboratory Services
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
100 PERSONAL SERVICES			105.3	115.8	127.4	140.1
200 TRAVEL		20.6	21.2	2.2	2.4	2.7
300 CONTRACTUAL		38.2	480.4	103.5	103.9	104.3
400 COMMODITIES		5.3	4.5	9.3	10.2	11.2
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS,CLAIMS,ETC.						
TOTAL		64.1	611.4	230.8	243.9	258.3

FUNDING (Thousands of Dollars)

GENERAL FUND		64.1	611.4	230.8	243.9	258.3
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS

FULL TIME			2	2	2	2
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)
The proposed legislation would create the Automated Fingerprint Identification System which would utilize a Rockwell 250 S Printak Central System in AST Headquarters.

In acquiring this tested, proved, and highly reliable system, law enforcement agencies can automatically search their already existing extensive fingerprint files to locate matches and print out identities of respondants. Search time would be reduced and match rate increase by at least 15%.

The initial cost of $2,718,200.00 as provided by this bill would provide all cost of the equipment and its installation through the end of FY'83 (see attached schedule "Capital Project Cost Estimate"). The FY'83-FY'87 cost noted above is the expected operating cost for these years including the cost for two non-commisioned positions.

IV. DATE May 18, 1982 PREPARED BY Francis C. Allan
AGENCY Department of Public Safety
PHONE 269-5691

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)
33-001 (Rev. 12/81)

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK
CAPITAL PROJECT COST ESTIMATE

250S Central System - unit cost including air shipment	$1,700.0
Subsystems - 3 units - (APD, Fairbanks & Juneau)	372.0
Installation cost	200.0
Site preparation	177.4
Spare parts inventory	207.3
Fingerprint file conversion	61.5
CAPITAL PROJECT TOTAL	$2,718.2

FCAAST
22682/688

Alaska Association Chiefs of Police

March 9, 1981

Honorable Charles G. Anderson
Pouch V
Juneau, AK 99811

Dear Representative Anderson:

A proposal has been drafted for possible legislative action which is of great interest and concern to not only the law enforcement community of Alaska but to all Alaskans.

This proposal called AFINA (Automated Fingerprint Identification Network of Alaska) concerns the establishment of a network of facsimile machines that would link with computers that automatically search and compare fingerprints.

This computer, which would be located at the Alaska State Troopers Headquarters, would be able to automatically search fingerprint cards obtained from arrested persons, against prints lifted from crime scenes. By interlocking this computer with terminals located at other regional locations, within a matter of minutes, the main fingerprint file in the State could be searched for possible suspects. This process now requires the mailing or taking of crime scene prints and suspects' prints to either Anchorage or Juneau for comparison by Police Technicians. This is so time consuming and it is not even done unless a possible suspect is known. However, with this computerized equipment, crime scene prints can be sent by facsimile equipment and phone lines from anywhere in the State to either Juneau or Anchorage and then automatically compared with every print in file.

This computer system, now used by other agencies in the Lower 48, is providing an identification rate of 10 to 15% on crime scene prints, compared to 1 to 3% using the present manual system. This would not only reduce the amount of time needed for the Technicians to search each case but the time an investigator would spend investigating a case.

The total cost of this statewide project is estimated to be $4,282,900.00. The program, though, would save hundreds of man hours and thousands of operational expense dollars. All this representing a great saving of time and money, an increase in recovered stolen property, as well as increasing crime clearance rates.

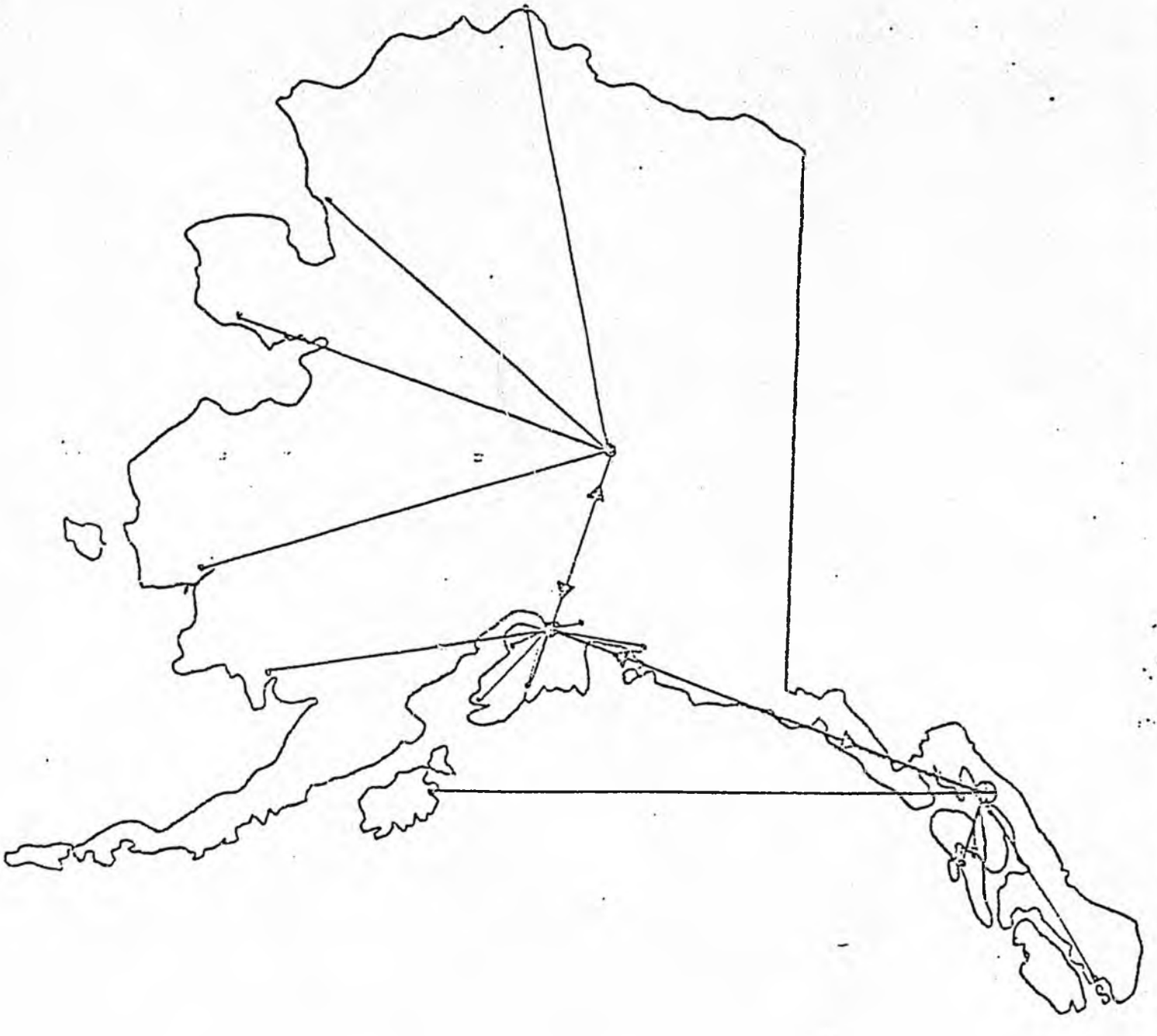
I cannot tell you how important such a system would be to law enforcement in Alaska. If this proposal comes before you, as a legislator, it would represent a more effective law enforcement tool for those you represent than any put before you in many years.

Sincerely,

Michael L. Daugherty

Michael L. Daugherty
President

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK OF ALASKA



WE HAVE A PROBLEM...

Law enforcement agencies in Alaska are like all law enforcement agencies everywhere, large and small. Our prime concern with every crime is: "Who committed this crime?"

Most - around 60% in fact - of the crimes committed in the State are perpetrated by "recidivists". That is, they are committed by people who tend to be arrested and re-arrested repeatedly as the years go by. Thus, when a crime takes place, our expereienced investigators may sometimes have a good mental list of suspects.

If Alaska police investigators were like the detectives in paperbacks, movies, and TV shows, they would solve every crime they encounter - by an unerring combination of ESP, James Bondian scientific gadgetry, and a set of unbelievably fortunate coincidences. In real life, however, detectives' lives are not so smooth.

Increasingly, police are forced, by such Supreme Court rulings as the Miranda and Escobedo decisions, to rely on physical evidence. Most real-life cases are cleared as a result of on-the-scene identifications by victims or witnesses, with the remainder being cleared through administrative investigatory methods such as fingerprinting.

Every time an arrest takes place in Alaska the alleged lawbreaker's fingerprints are rolled onto a 10-print file card. Altogether, the State files in 1980 contained a total of around 110,000 ten-print cards, also Anchorage had on filed more than 90,000 such cards. Thus, the city and State police departments had on file a total of 200,000 ten-print cards (or 2,000,000 individual prints) of known offenders. In addition the combined agencies have on file more than 25,000 individual, unidentified "latent" prints "lifted" at the scenes of crime.

When a police officer is able to find a good latent at a crime scene, it is possible in many cases to pull from file the cards of all those on his mental list of likely suspects and, try by manual handling and simple visual examination of the prints, to achieve a "hit" - that is, a match between the latent and a file print - in only a few hours. In 1979, around 3% of all the latents picked up by law enforcement officers in Alaska were identified by means of such manual processing.

Latent prints are found at just about 50% of all crime scenes, but, on the average, only a very small portion of the evidence is matched against a known print and results in a clearance. Even so, the matching of latents with known prints represents the majority of clearances that we make through administrative investigatory methods.

Why aren't more of the latents matched and more crimes cleared thereby? The answer lies in the time it takes to match a single unknown print against files containing literally millions of prints. To look for a match, by manual methods, among the more than 2 million fingerprints in the combined files would require a total number of hours and dollars obviously beyond the limits of practicality. It is not too surprising that, unless the police investigator has a pretty good idea of where to look before he starts, he usually simply doesn't start the time-consuming search.

Our problem in Alaska - is to find a way to search for matches with latents, through hundreds of thousands, even millions, of prints, in a practical amount of time, and at a practical expenditure of the dollars to pay for that time - is not our problem alone. It is still the problem of almost every law enforcement agency throughout the world. Its solution has the potential to dramatically increase crime clearance rates ... to slash law enforcement costs and, eventually, to act as a powerful deterrent to the commission of crimes.

A SOLUTION TO THE PROBLEM...

Our solution will save us hundreds of manhours and thousands of operational expense dollars - while upping our "hit" rate by more than 30% annually.

By acquiring an automated system - a tested, proven, highly reliable system that's faster, more efficient, and less costly to operate. The system would automatically search our extensive files in only minutes ... automatically find the most likely matches ... automatically print out identities of respondents, listed in descending order of their match probabilities.

By a conservative estimate, our search time will be reduced and our hit rate will be improved to at least 10 to 15%.

But ... reduced search times and more hits are not the only benefits of the automated system.

The automatic search techniques of this new system will also tend to eliminate the part that investigators play in the analysis of fingerprint evidence, since their input is no longer necessary to create lists of suspects. This will free investigators for their prime purpose - investigation. As a corollary, it will cut the amount of investigator costs involved in the fingerprint process.

SELECTION OF AUTOMATED EQUIPMENT

Fingerprints are universally recognized as the most positive means of identification in existence. In the first place, no two fingerprints in the entire world are alike. Furthermore, the "minutiae" within any given fingerprint remain unchanged throughout an individual's lifetime.

In 1980, Alaska law enforcemnt agencies were obtaining "latents" at approximately 50% of all crime scenes. The combined files of the Alaska State Troopers and Anchorage Police Department held a total of 25,000 unidentified latent prints, and more than 2 million identified, rolled prints.

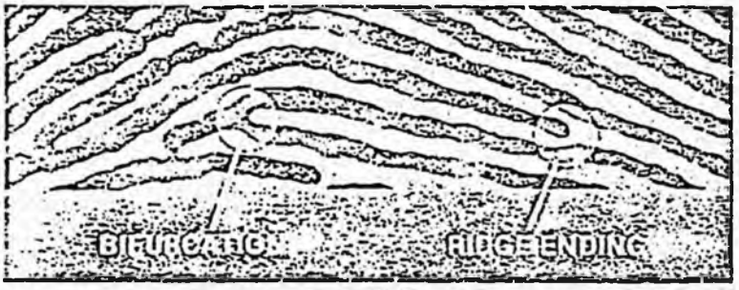
And yet - in spite of the extensive fingerprint file resources, the ability to lift latents at least half the time, and the unquestioned ability of fingerprints to positively identify, Alaska State Troopers and Anchorage Police Department were unable to put fingerprints effectively to work to solve crimes and to cut crime-clearance costs. With existing manual fingerprint processing, it simply takes too long. To find a match for a single latent, with no other clues to the criminal's identity than the print itself, it is more difficult than finding the proverbial haystack needle - and certainly a lot more expensive!

The crying need is for a way to search the files and obtain a match rapidly. It is increasingly evident that the only way to achieve the necessary search speeds would be by means of some sort of computerized system - in other words, through automation of the existing search-and-match process.

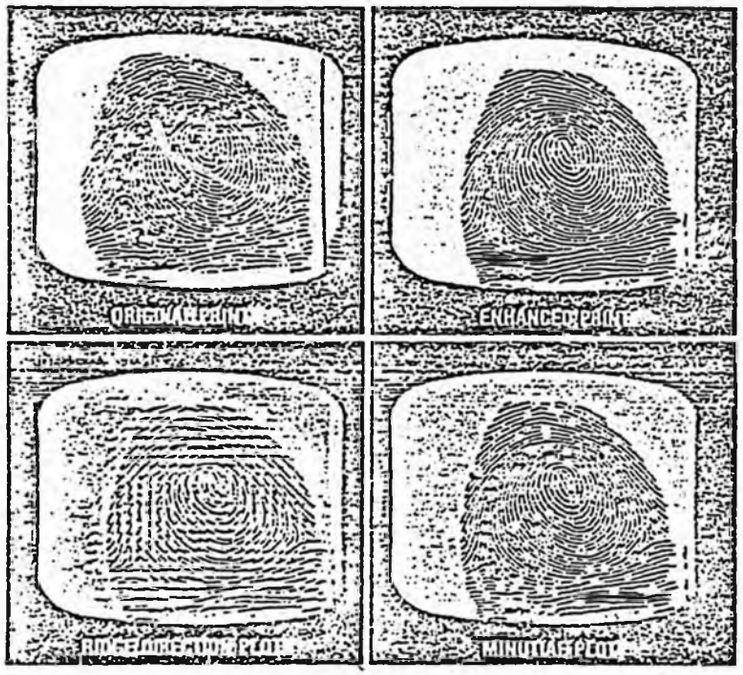
HOW DOES IT WORK?

The approach taken by the automated fingerprint identification equipment to fingerprint identification is based on the use of minutiae data consisting of the location and orientation of fingerprint ridges at points of termination (ridge endings) or branching into two ridges (bifurcation). Patterns of such minutiae uniquely characterize individual fingerprints and are the universal means whereby fingerprint experts are able to positively identify specific persons.

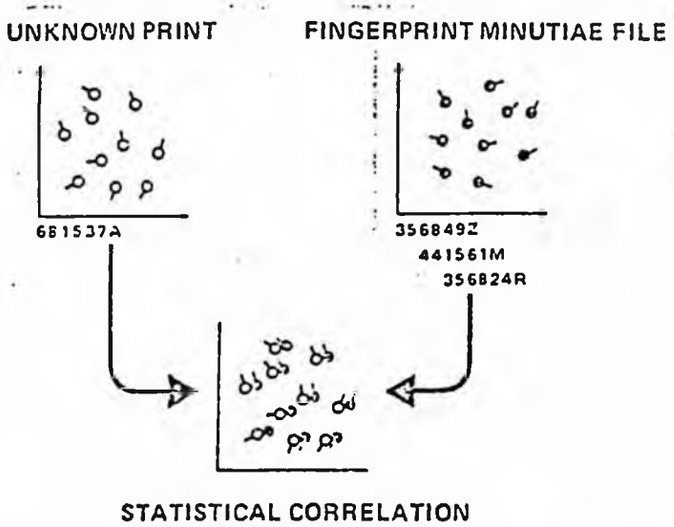
THE PRINTRAK 250S SYSTEM'S "MINUTIAE"-BASED APPROACH OFFERS ACCURACY ... SPEED ... AND ECONOMICAL TRANSMISSIBILITY OF DATA.



FINGERPRINT READING



FINGERPRINT MATCHING



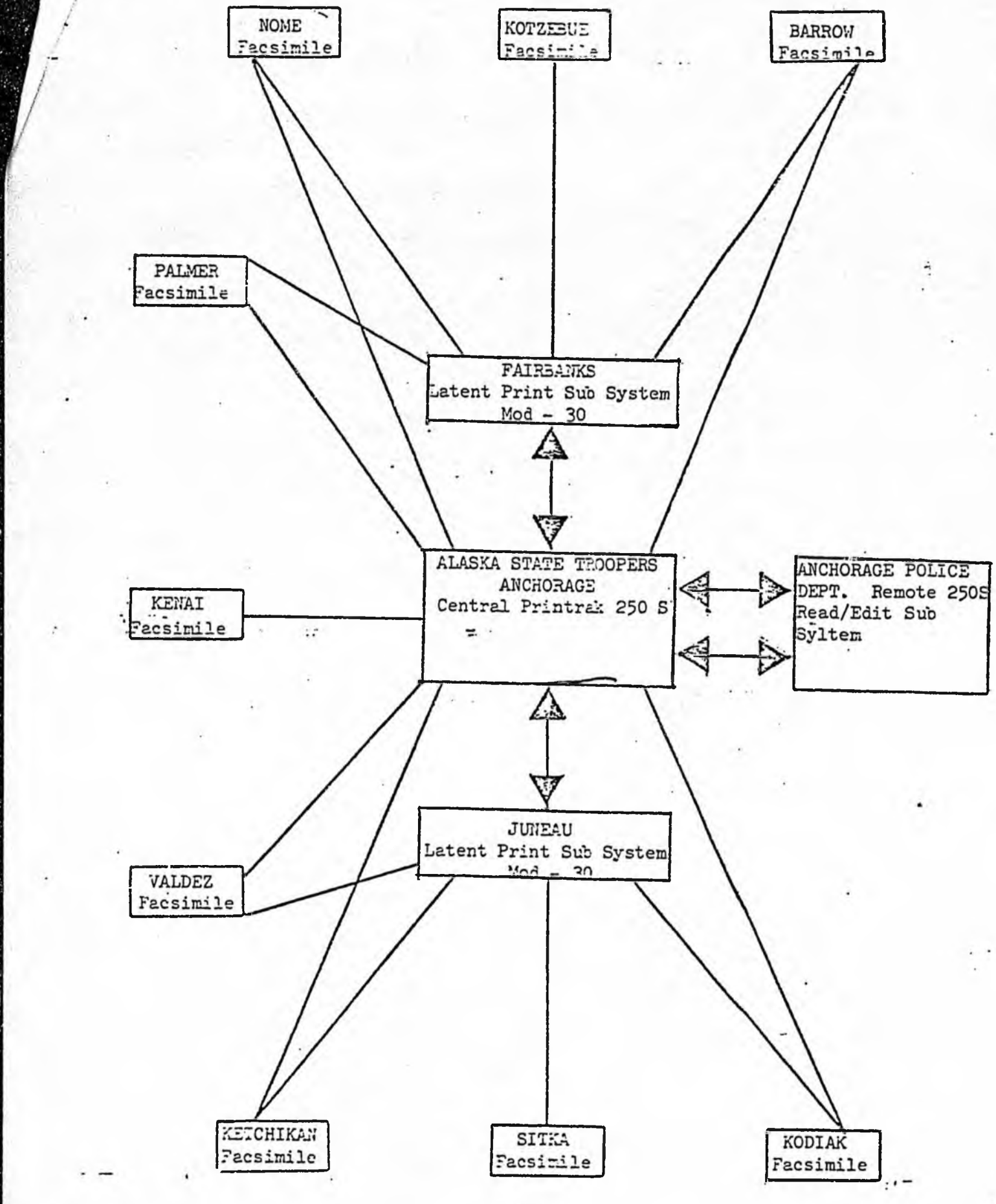
The equipment reads directly from card or paper input, which means there is no need for costly and time-consuming photographic processing of input information. The data which is stored for each fingerprint, and which is subsequently used for matching, are digital, binary-encoded descriptors, and is amenable to high-speed computer processing. In addition, sophisticated algorithms and dedicated processors make possible an extremely high processing speed which, in turn, makes the system highly cost-effective.

The minutia-based approach for automatically processing and matching fingerprints offers many significant advantages over other approaches. Foremost among these advantages is the discriminability of minutia-based systems which permits them to select with high accuracy one person, or a very few candidates from a very large file. All other current approaches must identify a large number of candidates in order to provide any reasonable assurance that the individual of interest is among them.

Because the automated system uses digitally encoded data and only 2500 bits of information are needed to uniquely describe a fingerprint, the system provides a means for transmitting fingerprint data both rapidly and inexpensively over ordinary telephone lines.

Another valuable feature of the system is its ability to maintain its own file of fingeprints for subsequent comparison with unknown prints. Conversion from card or paper format to digital records for permanent storage in system files is performed at the rate of up to sixty 10-print sets per hour. Once established, the file can be developed and updated on a continual basis.

Not least among the system's features are its compatibility with the minutia based system hardware/software of a rapidly growing number of users throughout the U.S.A. and abroad ... including the Federal Bureau of Investigation, a number of major U.S. cities, and the Royal Canadian Mounted Police. It is possible to tie these units together at selected times for cross-jurisdictional searches, if such are necessary.


NOME
Facsimile
KOTZEBUE
Facsimile
BARROW
Facsimile
PALMER
Facsimile
FAIRBANKS
Latent Print Sub System
Mod - 30
ALASKA STATE TROOPERS
ANCHORAGE
Central Printrak 250 S
ANCHORAGE POLICE
DEPT. Remote 250S
Read/Edit Sub
Syltem
KENAI
Facsimile
JUNEAU
Latent Print Sub System
Mod - 30
VALDEZ
Facsimile
KETCHIKAN
Facsimile
SITKA
Facsimile
KODIAK
Facsimile

THE ALASKA SYSTEM....

At present Alaska has two departments that have fingerprint files and the personnel to maintain them. The Anchorage Police Department and the Alaska State Troopers in Juneau and Anchorage, have Certified Fingerprint Examiners to maintain their fingerprint and latent print files. With possible expansion in mind and the number of trained fingerprint personnel, Anchorage, Juneau and Fairbanks are the most effective areas to place processing equipment.

The Rockwell 250S Printrak "Central" System would operate from the Alaska State Troopers Headquarters in Anchorage. All fingerprint cards taken by police departments and jails throughout Alaska would be entered.

Anchorage Police having the second largest files and trained personnel to maintain these files, would have a Rockwell Printrak 250S Read/Edit Subsystem. This would give A.P.D. the same ability as A.S.T. to enter it's files and search it's latent cases using the data storage at A.S.T. Head- quarters.

In Fairbanks and Juneau there should be a Rockwell Printrak Model 30 Remote Latent Subsystem in addition to the Anchorage Systems.

Making a truly Statewide Network that would bring every community in the State minutes away from fingerprints identifications a network of facsimile machines throughout Alaska. Using commercial phone lines, or micro-wave communication, fingerprint cards and latents can be sent from anywhere in the State to any latent system or subsystem in a matter of minutes. Communities like Sitka, Ketchikan, Valdez, Seward, Kodiak, Kenai, Nome, Kotzebue, Point Barrow and Palmer could be getting responses on their latents as well as those communities with main system components. Also, portable units can be obtained that would permit investigators to go to a crime scene any where in the State and be able to send latent information to be searched in the Central files.

OVERALL DESCRIPTION OF HARDWARE/SOFTWARE

Hardware

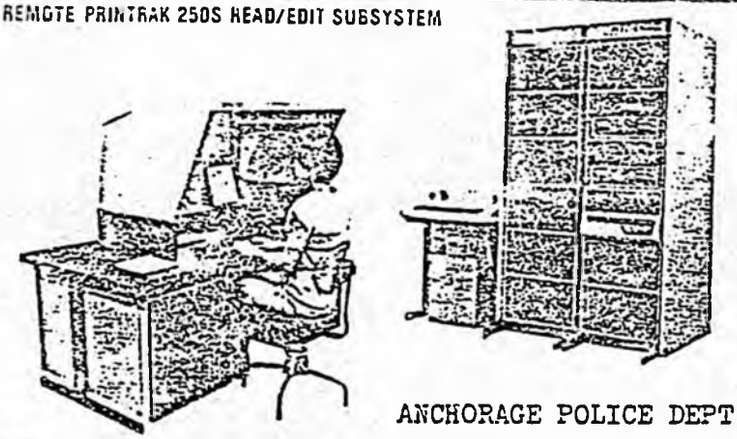
Three types of subsystems:

Read/Edit Subsystem; is made up of a Print Processor, a Read/Edit Operator Console, and a Printer. The subsystem is used to automatically examine fingerprints, extract their minutiae, enter descriptor data, initiate search requests, and obtain search requests. One Read/Edit Subsystem is located in the "Central" facility, A.S.T. Anchorage, and another at the Anchorage Police Department facility would be connected to the Search-and-Match Subsystem at A.S.T. Anchorage via voice-frequency telephone lines. The Read/Edit Subsystem is capable of processing both rolled prints and latents. This subsystem can enhance the quality of the prints using the Processor's computer.

Latent Subsystem; which includes a Latent Terminal and a Printer, gives the user automated assistance in entering descriptor data via keyboard, in encoding locations of minutiae in latent fingerprints, and in receiving results of file searches. A Latent Subsystem would be located at Juneau and Fairbanks facility and would be connected to the Central Search-and-Match Subsystem via a voice-frequency telephone line or microwave communications.

Search-and-Match Subsystem; consists ~~of a~~ Search-and-Match Processor, the Data Storage, and a Line Printer. There is only one Search-and-Match Subsystem in the entire network. Located in the Central facility, the Subsystem controls overall system operation, maintains the files, performs search-and-match functions, and reports results of searches to system operators at the various terminals.

REMOTE PRINTRAK 250S READ/EDIT SUBSYSTEM



ANCHORAGE POLICE DEPT.

"CENTRAL" PRINTRAK 250S SYSTEM

PRINT PROCESSOR

SEARCH PROCESSOR

READ/EDIT CONSOLE

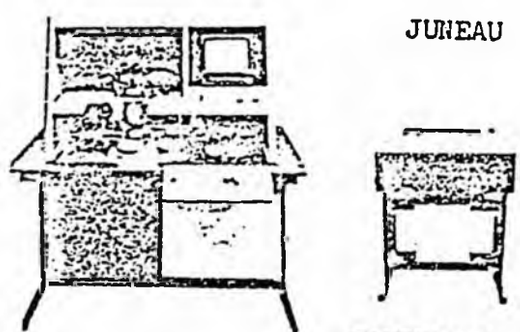
PRINTER

DATA STORAGE

ALASKA STATE TROOPERS ANCHORAGE

REMOTE LATENT SUBSYSTEM

JUNEAU



FAIRBANKS

Software

Automated operation is achieved via its software, that contains all the necessary programs for controlling and coordinating the systems's processes. The software is human-operated-oriented and makes extensive use of display messages, in ordinary English language, to "cue" (i.e., "prompt") the operator with questions which help him in following the proper operational procedures at all times. Thus, no complicated code needs to be learned, and operators need no software experience in order to operate the system.

The software programs, as executed by computers in the Print Processor and Search-and-Match Processor (see drawing), provide an orderly sequential control of all data flows between the hardware equipments, including those to the operator interfaces.

THE SEVEN "MODULES" ... WHAT EACH DOES AND HOW IT DOES IT

Read/Edit Operator Console

The Read/Edit Operator Console serves as the "interface" between the Automated Fingerprint ID System and the human operator. The console contains a keyboard, a TV-type CRT (cathode-ray tube) display and video mixer, a card indexer, a video scanner, a cursor control, and console electronics.

Upon receipt of a latent print or a 10-print card, the operator selects the desired mode of operation and interactively enters data through the keyboard in response to "cues" displayed to him on the display. Ten-print cards are placed on the card indexer platform, and the video images of the prints are transmitted to the Print Processor, which returns to the automatically encoded locations and orientations of the minutiae for each print, overlaid on a magnified image of the print on the display screen.

The console provides the operator with the capability to edit the displayed image by adding or removing minutiae. Encoding of poor-quality prints may be performed manually, if desired, by means of the console controls.

Printer

Each Read/Edit and Latent Console operator is provided with a Printer unit to print out the lists of respondents and other data required in operation of the system.

Line Printer

The Line Printer is a 300-line-per-minute, dot matrix printer/plotter, capable of printing alpha-numeric text. Its function is to print out, when so commanded by the System Files Supervisor, records from the Data Storage disks and other file-related data, e.g., minutiae patterns.

Data Storage

Data Storage contains the records of all data that have previously been encoded. In addition to the encoded minutiae for each fingerprint on file, these records include personal descriptors (e.g., suspect's sex, date of birth, etc), identification numbers and classification data for each print.

Records in Data Storage are grouped by single-finger classification, by finger number, and by descriptors. This data organization decreases the number of separate accesses to the file, and thus reduces the time required for any given latent search. An index provides file location information to individual finger records, and also provides the means whereby card searches can be performed. Employing four movable-head, direct-access disk units, Data Storage has an on-line storage capacity of

350,000 persons (3,500,000 prints). In addition, 25% of one of the four disks is available for storage of latents. Total capacity of Data Storage can be increased by the addition of more disk sets.

A particularly notable feature is the fact that unidentified latents can be stored on disks on-line, and subsequently can be compared against all new 10-fingerprint cards entered into the system. Thus, it is only a matter of time until hits can be obtained for almost all crime "repeaters".

Print Processor

The Print Processor works with the Read/Edit Operator Console in the Read/Edit Subsystem. Its functions are to receive video fingerprint images from the scanner in the Read/Edit Operator console, to process the images, and to locate minutiae. The Print Processor also accumulates a file of minutiae records on disk for later transfer via telephone line to the Search-and-Match Processor as a search inquiry or for distribution to the Central Data Storage fingerprint files. The Print Processor includes video storage, an image processor, a minicomputer, a disk memory, and a multiplexer, all contained in a single, upright cabinet.

Search-and-Match Processor

The Search-and-Match Processor is used in conjuction with the system's Data Storage and a Line Printer to form the Search-and-Match Subsystem. The Search-and-Match Processor consists of a minicomputer (PDP 11/34), a magnetic tape unit, an operating disk set, a computer console, a high-speed minutiae matcher, a multiplexer for communicating with the Read/Edit and Latent Subsystems, and a disk controller for communicating with the Read/Edit and Latent Subsystems, and a disk controller for communicating with Data Storage.

The Search-and-Match Processor uses a general-purpose minicomputer to perform all data processing not specifically assigned to special-purpose subsystems. It handles all transfers of data among major system elements, and coordinates and controls all system operations. Among it's functions are: placing data in Data Storage files, retrieving data from Data Storage files, sorting minutiae records by descriptor data, feeding sets of minutiae to the high-speed minutiae matcher, sorting match-score data into the sequence of descending match-score values for presentation of search results in compliance with the selected decision rule, sending and receiving data and commands over the telephone line interconnections to and from remotely located Read/Edit and Latent Subsystems, handling data transfers, and performing diagnostic tests on itself and on other system components.

Latent Terminal

The Latent Terminal handles latent prints only. Encoding of the prints is performed by the operator manually, rather than automatically as with the Read/Edit Subsystem. The encoding is accomplished by means of controls on the Latent Terminal console which permit the operator to locate, relocate, and erase minutiae that appear on the console's TV-type CRT display screen.

In addition to providing all of the functions necessary for encoding a latent fingerprint, the Latent Terminal also permits the operator to have an automatic search made of Central Data Storage from a remote location. The Terminal's self-contained, high-resolution TV camera scans each fingerprint presented to it, and then shows the operator an enlarged image of

the print on the console display. Brightness and contrast controls may be adjusted to provide an enhanced TV image of the latent print. The operator sends both descriptor data and commands to the Search-and-Match Processor from the Latent Terminal by means of the Terminal console's typewriter-type keyboard. The Search-and-Match Processor, in turn, can write text on the Latent Terminal's display screen - including data formats, input keystrokes, status messages, and search results.

COST

The Rockwell 250S Printrak system was developed with only one purpose; FINGERPRINT IDENTIFICATION! Because the equipment is custom made, the cost is high. Each machine is made to specifications of fingerprint identification as required by the Department.

Rockwell 250S Central System With extra Latent Terminal		$1,700,000.00
Rockwell 250S Remote Read/Edit Subsystem		$ 696,000.00
Two Rockwell 250S Latent Subsystems	#1	$ 126,000.00
	#2	$ 122,000.00
17 Facsimile Machines		$ 320,000.00
Conversion of Fingerprint Files		$ 200,000.00
Maintenance: Facsimile (per year)		$ 40,000.00
250S (82-83) 9 months		$ 282,825.00
Installation Cost		$ 200,000.00
Miscellaneous Cost (electric, travel, supplies etc.)		$ 300,000.00

This system could be operational by 1983. The facsimile machines could be operational before 1983 and could be used for transmission of fingerprint evidence, photos, mugshots, and reports long before the Rockwell system is operational.

This system should be considered a State system similar to the Alaska Justice Informatin System (AJIS) in that a central area of responsibility is needed to control the effectuality of the system. This system should be financially maintained by the State as a State system. Even though the Anchorage Police have a subsystem at their Department their files are being made availabe to the rest of the State by the entry of their files

into the "Central" system. This responsibility of future maintenance by the State would ensure that all areas of the State benefit equally from the Automated Fingerprint Identification Network of Alaska.

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK OF ALASKA

COST ANALYSIS

250S Central System	unit cost including air shipment		$ 1,700,000.00
	Maintenance Fiscal (82-83) 9 mos.		$ 204,300.00
250S Subsystem (A.P.D.)	unit cost including air shipment		$ 696,000.00
	Maintenance Fiscal (82-83) 9 mos.		$ 35,480.00
250S Latent Sybsystem Juneau and Fairbanks		Unit #1	$ 126,000.00
		Unit #2	$ 122,000.00
Maintenance Fiscal (82-83) 9 mos.		Unit #1	$ 20,880.00
		Unit #2	$ 18,435.00
Facsimile Bush Systems	unit cost @ 11,137 x 13		$ 144,781.00
Maintenance Fiscal (82-83) 12 mos. @ $1,480 x 13			$ 19,240.00
Facsimile Main Units	Anchorage P.D., Anchorage AST Fairbanks & Juneau AST @ 32,112 x 4		$ 128,448.00
Maintenance Fiscal (82-83) 12 mos. $5,300 x 4			$ 21,200.00

Installation cost 250S and Facsimile	$ 200,000.00
Conversion of Fingerprint Files	$ 200,000.00
250S System Cost Total	$ 2,840,000.00
Facsimile System Cost Total	$ 320,000.00
Maintenance Fiscal (82-83)	$ 338,900.00
Miscellaneous Cost	$ 300,000.00
TOTAL	$ 4,282,900.00
Maintenance Fiscal (83-84)	$ 412,540.00
Miscellaneous Cost (83-84)	$ 100,000.00

If A. S. T. or D. P. S. personnel trained on the maintenance of the Rockwell system and the facsimile system, a savings of $300,000.00 could be saved a year.

Training	$ 50,000.00
Maintenance fiscal (83-84)	100,000.00
Miscellaneous Cost (83-84)	100,000.00

R. F. HACKSTOCK
64TH SESSION

E. L. NEFF
64TH SESSION

POLICE DEPARTMENT
CITY OF KETCHIKAN

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D. A. Anslinger, III
Chief of Police

P.O. BOX 7300
KETCHIKAN, ALASKA 99901

March 25, 1981

Representative Freeman
Alaska State Legislature
Pouch V
State Capitol
Juneau, Alaska 99811

Dear Representative Freeman:

The Automated Fingerprint Identification Network of Alaska (AFINA) is one of the most exciting proposals to be presented before the Alaska Legislature in many years. A system which will not just benefit the law enforcement community, but every law abiding citizen of the State.

The AFINA System would connect all areas of the State by way of phone or microwave communications to a central computer which is capable of searching the 2 million fingerprints found in the State, thereby producing suspects from fingerprints found at the crime scene. Something that without this computer network can only be done on television detective shows.

With the AFINA System, if a burglary occurred in Ketchikan, the fingerprints found and lifted from the scene could be transmitted to the central computer via telephone by use of a facsimile transmitter and within a very short time the fingerprints would be identified and the name of the suspects along with photographs and descriptive data returned to Ketchikan over the same facsimile transmitter. All this before the investigating officers depart the scene of the burglary, thereby dramatically increasing the possibility of apprehension and recovery of stolen property.

This proposal will be presented to the Alaska Legislature and I strongly request your support in approving the Automated Fingerprint Identification Network of Alaska.

Sincerely,

D. A. Anslinger, III
Chief

DAA:mp

Rapist eludes cops, but computer could bring him to justice

By SHEILA TOOMEY
Daily News reporter

Anchorage Daily News/Paul Brown

Tom Morris, the Anchorage Police Department fingerprint expert, goes through his files. Above, numbers show the points of correlation in a typical fingerprint.

INKED FINGERPRINT

On a January night in downtown Anchorage a rapist sat waiting for his victim in the front seat of her car, hidden by darkness and windows coated with frost. The unsuspecting woman walked across the parking lot at Seventh Avenue and C Street and opened the car door.

"Get in," the rapist said, pointing a gun at her. She did.

A month later, on Feb. 18, 1979, two women walked into a downtown hotel parking lot at 6 a.m. As they neared their car a man walked up behind them.

"Get in," he said, pointing a gun at them. They did.

Six months passed between the second attack and the third. Police eventually would theorize that the rapist left town or somehow changed his living pattern during the summer.

On Aug. 23 he trapped another woman. This time the script was a little different.

The victim was working the late shift alone in a downtown office. The horror was the same — threatened with death and raped at

See Back Page, RAPIST

Rapist who has terrorized women downtown could be caught by computer, police say

Continued from Page A-1

gunpoint. Other victims followed, raped in their homes, offices and cars — at least 15, police think.

There are more than 200 rapes a year in Anchorage and it was seven months before investigators began to link a few of them as perhaps the work of the same person. His victims described him as a young black man of average height and build who always wore a mask, carried a gun and spewed racial venom. There are other similarities that the police won't discuss but the identity of the downtown rapist remains a frustrating mystery.

Investigators working the stalled case are doubly frustrated because they believe they have the key to the man's identify in their files. They just don't have the equipment to decipher it.

On Christmas Day 1980, the rapist made a mistake that would likely have cost him his freedom in Minneapolis, Miami, Sacramento and 10 cities in Maryland, to name just a few places. He left his fingerprint behind at the home of a victim — a single perfect print.

The rapist has told several victims of having been in jail. If that is true — and police think it is — his fingerprints are on record, which means they are on one of a hundred thousand 8-inch-square fingerprint file cards.

On televison, crooks never leave fingerprints because even the dumbest TV felon knows it means instant capture. In real life, anonymous Alaska criminals can leave all the fingerprints they want to.

Once a suspect is in custody, prints lifted from a crime scene can be matched and used in court. But to match a single unknown print to an unidentified suspect would mean comparing the print to each of 10 prints on 100,000 cards. That means a million comparisons.

It would take a person working full time four years to check them all, says Anchorage Police Department fingerprint expert Tom Morris, and that is why the downtown rapist remains unidentified three years after he began terrorizing women in Anchorage.

The case is not closed, but leads other than the unidentified fingerprint have been exhausted, said police detective Greg Russell. The usually reliable snitch system of crime solving doesn't work with rape. "The problem is a rapist doesn't go around and brag about it," Russell said. "There's a lot of hatred for them. Even in prison they're the scum."

Investigators can only hope victims who may not have reported being attacked when it happened will come forward.

"There have to be other women out there who have been raped by this guy," Russell said. Two out of three rapes in Anchorage are not reported, he estimated.

A victim who thinks she might have been attacked by the downtown rapist can call STAR or Crimestoppers if she doesn't want police to know who she is, Russell said. Every victim who tells her story means the possibility of a new clue.

Police do have one other hope.

The power to turn that single print into a name and picture rests with the Alaska Legislature, which is considering whether to fund a statewide computerized fingerprint identification system. One month and five minutes after such a computer arrives here, the downtown rapist, if he has ever been arrested, will have a name, Morris says.

One month is the time it will take police to transfer the department's laborious manual classification system to the new computer. The five minutes is how long Morris estimates it will take him to feed the rapist's single print into the computer and get back a match.

As far as investigators who have worked the case are concerned, the single fingerprint they have been staring at for more than a year will be the first one fed through the new computer — assuming lawmakers approve its purchase.

But lowly investigators may have to get in line — behind Chief Brian Porter. Twenty-one years ago, Porter, then an investigator, lifted a fingerprint from a homicide scene and it's been in his personal evidence locker ever since.

A woman was found shot to death in her car in the mall parking lot at Northern Lights Boulevard and Spenard Road. A bloody print was found on the inside of the driver's window and proved not to belong to the victim. The case remains unsolved.

"I know I have the fingerprint of a murderer and it is likely we have his or her prints (on file)," Porter said Friday. "But we didn't then, nor do we now have the capability of single-print searching."

Capturing rapists and murderers makes dramatic headlines, but the criminal who victimizes the largest number of Anchorage residents is the burglar.

Anchorage police burglary investigator detective Joe Austin gets a blissful look on his face as he talks about the fingerprint computer.

"There were 3,000 burglaries in Anchorage last year, he says. "We have fingerprints from about 50 percent of them." Austin estimates the recidivism rate among Anchorage felons is about 70 percent, which means there is a high probability of matching many of those carefully stored crime-scene prints to the files of known criminals.

A manual search is impossible when investigators don't have a print from each finger, say Morris, Austin and Porter. The only manual search mounted to identify a single print that Porter has ever heard of was in 1968 — by the FBI in the Martin Luther King assassination.

The Federal Bureau of Investigation now has 300 million fingerprint cards and 11 computers like the one Anchorage hopes to get. But in pre-computer 1968, they began going through their print file one card at a time.

They got lucky. A month after they began, King's assassin, James Earl Ray, was identified as a suspect by other means, enabling FBI investigators to go right to his file and make the match that way, Porter said.

Cities that have fingerprint computers regularly solve old crimes, Morris says. Miami, the murder capital of America, bought one recently. In Minneapolis/St. Paul, police even recheck thefts where the statute of limitations has run out, he says. When they develop a case against a suspect now beyond the reach of criminal charges, they turn the evidence over to insurance companies who paid off on the long-ago thefts and invite them to pursue the matter in civil court.

Funds for purchase of a fingerprint computer for the state have been approved by the Alaska House and Sen. Vic Fischer, D-Anchorage, will preside Thursday at a Senate hearing in Juneau about the computer. Fischer says he is concerned about the possible use of the computer. Fischer questions whose prints will be stored and who will be allowed to use the computer.

The present criminal information computer system has a 10 percent inaccuracy rate and is open to almost anyone who wants to use it, Fischer said. "There is some concern that (the fingerprint computer) not just be wide open for non-criminal purposes, like verifying credit risks and things like that."

Fischer also questioned if a fingerprint computer is "just one more way to regiment everyone and keep an eye on them."

Money is another issue. Holly Ploog, lobbyist for the Anchorage Police Officers Association, gnashes her teeth when legislators say there isn't enough cash in the state treasury to pay for the complete $4.2 million system or the $1.7 million bare-bones system.

"I just keep thinking about the $4 million they gave Alaska '84 to plan a birthday party," she says.

Detective Austin, a spokesman for the Police Officers Association, tracked the downtown rapist for more than a year. He also speaks bitterly about priorities. "How much is it worth to catch this guy?" he says. "Why don't you ask his next victim."

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST — CSHB 344 (Finance)
Bill/Resolution No.
Title Spec. Approp. for a computerized fingerprint system
Requested by House Finance Date 1/22/82

II. FISCAL DETAIL
Agency Affected Department of Public Safety
Program Category Affected
BRU, Program, Or Subprogram(s) Affected Laboratory Services
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
100 PERSONAL SERVICES			105.3	115.8	127.4	140.1
200 TRAVEL		20.6	21.2	2.2	2.4	2.7
300 CONTRACTUAL		38.2	480.4	103.5	103.9	104.3
400 COMMODITIES		5.3	4.5	9.3	10.2	11.2
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS,CLAIMS,ETC.						
TOTAL		64.1	611.4	230.8	243.9	258.3

FUNDING (Thousands of Dollars)

GENERAL FUND		64.1	611.4	230.8	243.9	258.3
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS

FULL TIME			2	2	2	2
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)

The proposed legislation would create the Automated Fingerprint Identification Network which would utilize a Rockwell 250 S Printak Central System in AST Headquarters with a Read/Edit Sub-system in the Anchorage Police Department. In acquiring this tested, proved and highly reliable system, law enforcement agencies can automatically search their already existing extensive fingerprint files to locate matches and print out identities of respondents. Search time will be reduced and match rate increased by at least 15%.

The initial cost of ~~$3,042,200~~ 2,715,200 as provided by this bill would provide all costs of the equipment and its installation through the end of FY 83 (see attached schedule "Capital Project Cost Estimate"). The FY 83 - FY 87 cost noted above is the expected operating cost for these years including the cost for two positions.

IV. DATE 01/22/82 PREPARED BY Robert F. Schroeder
AGENCY Legislative Finance Division
PHONE 465-3795

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)
33-001 (Rev. 12/81)

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK
CAPITAL PROJECT COST ESTIMATE

250S Central System - unit cost including air shipment	$1,700.0
Latent print subsystems - 1 each in Anchorage, Fairbanks & Juneau at $124,000 per unit	372.0
Installation cost	200.0
Site preparation	177.4
Spare parts inventory	207.3
Fingerprint file conversion	61.5
CAPITAL PROJECT TOTAL	$2,718.2

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK
OPERATING COST ESTIMATE

CODE	DESCRIPTION	FY 83	FY 84
100	Personal Services		
	111 Reg. Comp. (2x19AGGU)		74.9
	121 Overtime (180 hrs. X 26.19)		5.2
	121 Shift Differential (19AX3.75)		1.4
	Subtotal		81.5
	VAR. Benefits (17.67%)		14.4
	184 FICA (6.65%)		5.4
	185 Group Medical (1800X2)		4.0
	100 TOTALS		105.3
200	Travel and Moving		
	211 In State Travel	2.4	
	212 In State Per Diem	3.2	
	223 Out of State Travel	5.0	6.8
	224 Out of State Per Diem	5.3	14.4
	291 Transportation	2.5	
	292 Technician Per Diem	2.2	
	200 TOTALS	20.6	21.2
300	Contractual Services		
	311 Phone	.7	5.1
	314 Postage		.4
	326 Subscription & Info.		.2
	349 Main. Contract & File Conver.	22.3	424.7
	*389 Training	3.6	50.0
	394 Conference Registration	.3	
	397 Freight	11.3	
	300 TOTALS	38.2	480.4
400	Supplies and Materials		
	425 Janitorial Supplies	.9	.9
	481 Stationary & Supplies	4.4	
	483 Computer Commodities		3.6
	400 TOTALS	5.3	4.5
	PROJECT TOTALS	64.1	611.4

*Contractor training of state employee to maintain the system.

Original sponsors: Anderson, Adams, Grussendorf, et al

Offered: 1/29/82
Referred: Rules

Funding Information
General Fund $2,718,200
Other Funds -0-
$2,718,200

IN THE HOUSE BY THE FINANCE COMMITTEE

CS FOR HOUSE BILL NO. 344 (Finance)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Public Safety for a computerized fingerprint system; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $2,718,200 is appropriated from the general fund to the Department of Public Safety for a computerized fingerprint identification system.

* Sec. 2. The appropriation made by this Act is for a capital project and is subject to AS 37.25.020.

* Sec. 3. This Act takes effect immediately in accordance with AS 01.10.-070(c).

Original sponsors: Anderson, Adams, Grussendorf, et al

Offered: 4/27/82
Referred: Finance

Funding Information
General Fund $1,700,000
Other Funds -0-
$1,700,000

IN THE HOUSE BY THE STATE AFFAIRS COMMITTEE

SENATE CS FOR CS FOR HOUSE BILL NO. 344 (State Affairs)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWELFTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Public Safety for a computerized fingerprint system; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $1,700,000 is appropriated from the general fund to the Department of Public Safety for a computerized fingerprint identification system.

* Sec. 2. The appropriation made by this Act is for a capital project and is subject to AS 37.25.020.

* Sec. 3. This Act takes effect immediately in accordance with AS 01.10.-070(c).

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. CSHB 344 (Finance)
Title Special Appropriations for a computerized fingerprint system.
Requested by _____ Date _____

II. FISCAL DETAIL
Agency Affected Department of Public Safety
Program Category Affected Administration of Justice
BRU, Program, Or Subprogram(s) Affected Laboratory Services
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
100 PERSONAL SERVICES			105.3	115.8	127.4	140.1
200 TRAVEL		20.6	21.2	2.2	2.4	2.7
300 CONTRACTUAL		38.2	480.4	103.5	103.9	104.3
400 COMMODITIES		5.3	4.5	9.3	10.2	11.2
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS,CLAIMS,ETC.						
TOTAL		64.1	611.4	230.8	243.9	258.3

FUNDING (Thousands of Dollars)

GENERAL FUND		64.1	611.4	230.8	243.9	258.3
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS

FULL TIME			2	2	2	2
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)

The proposed legislation would create the Automated Fingerprint Identification Network which would utilize a Rockwell 250 S Printak Central System in AST Headquarters with a Read/Edit Sub-system in the Anchorage Police Department.

In acquiring this tested, proved and highly reliable system, law enforcement agencies can automatically search their already existing extensive fingerprint files to locate matches and print out identities of respondents. Search time would be reduced and match rate increased by at least 15%

The initial cost of $2,718,200 as provided by this bill would provide all cost of the equipment and its installation through the end of FY'83 (see attached schedule "Capital Project Cost Estimate"). The FY'83 - FY'87 cost noted above is the expected operating cost for these years including the cost for two non-commissioned positions.

IV. DATE February 26, 1982 PREPARED BY Francis C. Allan
AGENCY Department of Public Safety
PHONE 269-5691

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)
33-001 (Rev. 12/81)

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK
OPERATING COST ESTIMATE

CODE		DESCRIPTION		FY'83	FY'84
100		Personal Services			
	111	Reg. Comp. (2x19AGGU)			74.9
	121	Overtime (180 hrs. x 26.19)			5.2
	121	Shift Differential (19AX3.75)			1.4
			Sub-total		81.5
	VAR.	Benefits (17.67%)			14.4
	184	FICA (6.65%)			5.4
	185	Group Medical (1800x2)			4.0
			100 TOTALS		105.3
200		Travel and Moving			
	211	In-State Travel		2.4	
	212	In-State Per Diem		3.2	
	223	Out-of-State Travel		5.0	6.8
	224	Out-of-State Per Diem		5.3	14.4
	291	Transportation		2.5	
	292	Technician Per Diem		2.2	
			200 TOTALS	20.6	21.2
300		Contractual Services			
	311	Phone		.7	5.1
	314	Postage			.4
	326	Subscription & Information			.2
	349	Main. Contract & File Conver.		22.3	424.7
	*389	Training		3.6	50.0
	394	Conference Registration		.3	
	397	Freight		11.3	
			300 TOTALS	38.2	480.4
400		Supplies and Materials			
	425	Janitorial Supplies		.9	.9
	481	Stationary & Supplies		4.4	
	483	Computer Commodities			3.6
			400 TOTALS	5.3	4.5
		PROJECT TOTALS		64.1	611.4

*Contractor training of state employee to maintain the system.

FCAAST
22682

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK
CAPITAL PROJECT COST ESTIMATE

250S Central System - unit cost including air shipment	$1,700.0
Subsystems - 3 units - (APD, Fairbanks & Juneau)	372.0
Installation cost	200.0
Site preparation	177.4
Spare parts inventory	207.3
Fingerprint file conversion	61.5
CAPITAL PROJECT TOTAL	$2,718.2

FCAAST
22682

Rec'd 5/20/82

THE LEGISLATURE OF THE STATE OF ALASKA
TWELFTH LEGISLATURE

FISCAL NOTE

I. REQUEST
Bill/Resolution No. CS HB 344 (Finance)
Title Special Appropriations for a computerized fingerprint system.
Requested by _____ Date _____

II. FISCAL DETAIL
Agency Affected Department of Public Safety
Program Category Affected Administration of Justice
BRU, Program, Or Subprogram(s) Affected Laboratory Services
(Note: If more than one budget component is affected, separate line-item amounts and funding for each component in the analysis section.)

EXPENDITURES (Thousands of Dollars)

	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87
100 PERSONAL SERVICES			105.3	115.8	127.4	140.1
200 TRAVEL		20.6	21.2	2.2	2.4	2.7
300 CONTRACTUAL		38.2	480..	103.5	103.9	104.3
400 COMMODITIES		5.3	4.5	9.3	10.2	11.2
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS,CLAIMS,ETC.						
TOTAL		64.1	611.4	230.8	243.9	258.3

FUNDING (Thousands of Dollars)

GENERAL FUND		64.1	611.4	230.8	243.9	258.3
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS

FULL TIME			2	2	2	2
PART TIME						
TEMPORARY						

III. ANALYSIS (See Fiscal Note Preparation Instruction, Section III)
The proposed legislation would create the Automated Fingerprint Identification System which would utilize a Rockwell 250 S Printak Central System in AST Headquarters.

In acquiring this tested, proved, and highly reliable system, law enforcement agencies can automatically search their already existing extensive fingerprint files to locate matches and print out identities of respondants. Search time would be reduced and match rate increase by at least 15%.

The initial cost of $2,718,200.00 as provided by this bill would provide all cost of the equipment and its installation through the end of FY'83 (see attached schedule "Capital Project Cost Estimate"). The FY'83-FY'87 cost noted above is the expected operating cost for these years including the cost for two non-commisioned positions.

IV. DATE May 18, 1982 PREPARED BY Francis C. Allan
AGENCY Department of Public Safety
PHONE 269-5691

Original: Legislative Finance
cc: Budget and Management
Prime Sponsor (First Legislator Named)
33-001 (Rev. 12/81)

AUTOMATED FINGERPRINT IDENTIFICATION NETWORK
CAPITAL PROJECT COST ESTIMATE

250S Central System - unit cost including air shipment	$1,700.0
Subsystems - 3 units - (APD, Fairbanks & Juneau)	372.0
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