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Maine Public Law 2007,
Chapter 648,
“An Act to Enhance the
Security of State Credentials”



Findings and Recommendation
Relating to Driver Licenses
and
Non-Driver Identification Cards

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SECTION 1 - INTRODUCTION

Maine Public Law 2007, Chapter 648, “An Act to Enhance the Security of State Credentials,” (unallocated language in Sections 7 and 8; Appendix A) requires the Secretary of State to conduct two studies to determine the cost effectiveness of implementing security enhancements to the driver license and identification card issuance process. The first study obligates the Secretary of State to determine “the most cost-effective way, such as facial recognition or fingerprint technology, to ensure that an applicant does not have more than one driver’s license or non-driver identification card issued by the State.” The other study directs the Secretary of State to examine “the most cost-effective way to develop and implement policies and procedures in order to take and maintain photographs of applicants at the time an application for a driver’s license or non driver identification card is submitted.” The Public Law instructs the Secretary of State to prepare a report of findings and recommendations following the studies to the Governor and the Joint Standing Committee on Transportation no later than October 1, 2009. This submission is pursuant to that obligation.

This document contains the results of both studies. Section II describes the findings concerning the implementation of technology to minimize the issuance of duplicate credentials to the same individual. Section III discusses the process and technology relating to photo capture at time of application (referred to as “upfront photo capture”) of credential applicants. Section IV provides the Bureau of Motor Vehicles recommendations concerning the implementation of each of these technologies described herein.

SECTION 2 – DUPLICATION AVOIDANCE

In the Spring of 2008, the Bureau of Motor Vehicles issued a Request For Information (RFI) and engaged in multiple conversations with private vendors of biometric marker technology for credentials to ascertain the efficacy of using fingerprints or facial recognition to verify the identity of credential applicants.

Facial Recognition

Facial recognition technology is designed to compare the facial features of a person applying for the issuance of a credential with those of a person depicted in an existing photograph to determine whether the credential applicant is the same individual shown in the existing photograph. While facial recognition technology has advantages of using the Bureau of Motor Vehicles’ existing photograph archive to accomplish identity verifications and doesn’t require the active participation of an applicant, it has its disadvantages.

Briefly, the technology focuses on certain points within the facial sphere (excluding things like facial and scalp hair, ears, etc.) to confirm the identity of an individual or whether a duplicate record exists. When the system determines a discrepancy, it pulls the credential record prior to it being forwarded to the production

facility. These pulled credential records will require an investigator to review each record and determine whether to allow them to move forward through the production process. Based on the best case percentage of 3%, which would generate about 20 records a day for review based on Maine's production rates. If even 20% (we estimate that at a minimum) require additional investigation, that would create four cases a day requiring an in-depth investigation on which a decision to issue or not issue a credential hinges. Adding those cases to our Office of Investigations division's work will result in decision delays which we believe would unnecessarily inconvenience (or more seriously impact) the affected citizens of Maine. The vendor indicated that the State of Colorado uses the facial recognition technology and has had to assign two investigative staff to deal with the rejections they are encountering.

Due to the additional procedural requirement in the credentialing process as it relates to facial recognition, there will be a need for additional 2 to 4 customer service representatives which would be dispersed in the offices with the highest customer traffic. The salary and benefits cost related to these positions will range from \$99,616 to \$199,234. The additional procedure requires staff to validate the person's facial identity up front with previously obtained images in our database (one to one matches). If a positive match is made, the process moves ahead; however, if a negative match occurs, the process ceases and this will require further conversation and interaction with the customer before process continues or ends. Procedural guidance for handling these scenarios will need to be developed and implemented.

The cost to implement the software technology update by the vendor will be at least \$0.67 per card (\$670,000, assuming one million credentials). Additionally the Bureau of Motor Vehicles will incur estimated costs of \$255,000 for ongoing system maintenance costs and the need for one additional BMV Detective position to handle the 3% kick out rate generated from this process. Estimated total cost to implement facial recognition technology ranges from \$952,366 to \$1,051,981. (Appendix B – Cost Analysis)

Fingerprint Technology

There are at least eight licensing jurisdictions that capture and compare fingerprints as part of the applicant identification process. All these jurisdictions use a one to one matching system (comparing the applicant's print with a print stored in the database). All but three of these jurisdictions mandate the capture of fingerprints as part of the credential issuance process. Arkansas began capturing fingerprints in the 1970s and California has been doing so for more than ten years. All of the vendors that were interviewed had a contract with a State that uses fingerprints to identify credential applicants.

The fingerprint is the most common biometric used in the "biometric market," representing a 44% market share as compared to the 19% market share of facial recognition. The technology used to capture, store and compare fingerprints is both time tested and highly reliable. Fingerprints have long been accepted by the courts as reliable

probative evidence to establish a person's identity. Interestingly, three States – Colorado, Texas and California – utilize both facial recognition and fingerprints to identify credential applicants and specifically rely on the fingerprint comparison to resolve matching issues raised by the facial recognition technology. This is consistent with the opinion expressed by one vendor that a fingerprint is more accurate than facial recognition in verifying a person's identity.

One State uses an AFIS (Automatic Fingerprint Identification System), which attempts to match the applicant's print with all others in the database. The AFIS option was not examined because the software is more complicated, time consuming and costly, is used by a small minority of jurisdictions and is impractical since there is no existing fingerprint file in existence.

The hardware involved in a fingerprint capture system is the scanner (capture device), generally about six inches long, four inches tall and three inches wide, and a cable to attach the scanner to the work station. The scanner can be purchased for approximately \$500.00. The software which transports the fingerprint image from the capture device to the database and then performs the comparison is simple where only a one to one comparison is sought.

Two methods were used to determine the cost of acquiring a fingerprint identification system – a per work station basis and the incremental cost of the individual card attributable to the fingerprint system. The financial outlay for equipping all work stations, internal and external, both fixed and mobile and spare units, eighty total, including the costs associated with the software is approximately \$2,000.00 per work station (80 total) or \$160,000 total.

According to vendors, a one to one matching fingerprint system comprises between 10% and 25% of the total cost of the card, which is largely contingent on volume of credentials issued. For instance, our current contract costs \$2.10 per card. The cost of fingerprinting on a per card basis pursuant to the existing agreement would range from \$0.210 to \$0.535 per card or \$210,000 to \$535,000 over the life of a contract assuming one million issued credentials. The Bureau of Motor Vehicles information services' team estimates approximately 20 hours of programming needed to the BMV application to support this additional process. Additional costs will incur as it relates to providing and maintaining current servicing levels by the agency to the citizens of Maine. Implementing this technology also creates a procedural change in the credentialing process, thus creating a need for approximately 3 to 6 customer service representative positions in the branch offices at a cost range of approximately \$149,423 to \$298,847 including employee benefits.

To summarize, fingerprint identification is the most popular, widespread, and reliable biometric technology available today. It is relatively inexpensive; however, some jurisdictions have faced challenges in mandating the collection of customer's fingerprints. The license vendor informs us that the jurisdictions that have this biometric technology in place are only attaining 65% to 75% customer participation as some

customers refuse to provide their fingerprints. Another issue is that it would take a full cycle of renewals (at least 6 years) to obtain a database (65% to 75%) of fingerprints. If Maine were to employ this technology, Legislative actions would be needed to mandate the collection of fingerprints as it relates to the driver license and identification process.

Estimated total cost to implement fingerprint technology will range from \$519,923 to \$994,347. (Appendix B – Cost Analysis)

SECTION 3 - PHOTO CAPTURE AT TIME OF APPLICATION

The existing system used to manufacture driver's licenses and identification cards specifically associates or ties the photograph of an applicant to the production of a credential, which means a photograph is captured after an application for a credential is accepted and the photograph is taken as part of the production process. To enable the capture of photographs outside the credential production process, it will require the disassociation of the photograph from the manufacturing process. This disengagement necessitates modification to both the Bureau of Motor Vehicles' system and the system of the vendor used to produce credentials. These modifications will also include changes in the physical layouts of some of the branch offices if introduced.

There are at least eight jurisdictions that capture the customer's image at the start of the licensing or non-driver identification process. There are four more jurisdictions with plans to implement this process at the beginning of 2010. Fraud prevention was the main reason for implementing the photo first technology for some of the jurisdictions. Of the eight jurisdictions already using this process, applicants are pre-screened either by staff working an informational window or at the service window. Once staff determines the customer is applying for a driver's license or non-driver identification, staff initiate the photo first software before creating the customer record in the motor vehicle databases. Additionally, these jurisdictions mandate that the image of a customer be captured at the learner's permit application process, Maine only captures the image at issuance of the driver license credential thus changing our procedural process. One jurisdiction, Utah, is in the process of remodeling their field offices to allow for the photo-first process.

If the Bureau of Motor Vehicles were to employ the up front photo capture at the start of the licensing process, this would have to include the driver permitting process. This would dramatically change the Bureau's current process. Applicants would no longer be able to mail in license permit applications. Applicants would be required to visit a branch location or mobile unit site for staff to capture the applicant's image before permitting paperwork is processed. All permitting application and paperwork would be sent to the main office and the learners permit credential would be issued from the exam unit in the central office. Currently, Maine has 50 exam locations (13 branch offices, 21 CDL exam sites and 16 non-commercial exam sites) that process application paperwork and issue learner permits instantly, this would no longer be the case should photo first technology be implemented.

This process impacts the driver education process as well. Under the present model, approximately 15,000 permits are issued directly to the permittee upon completion of the program. Implementing the up front photo capture would require the applicant to report to a branch office for staff to take the photo and then complete driver education requirements. All paperwork associated with driver education completion would be submitted to the main office for centralized issuance of learner's permit.

Based on this information, the Bureau of Motor Vehicles would need at a minimum of 3 to 5 additional FTEs dispersed accordingly throughout the agency to absorb the customer inflow and paperwork as it relates to the driver education process. The cost to fund these positions is approximately \$144,760 to \$244,376.

As mentioned earlier, the central office and branch office locations would require modifications to accommodate this process change including but not limited to, additional workstations for staff to possible location change of the camera capture station within all the offices. Costs required to change the physical layouts of the offices are undetermined at this time but could be significant.

There are two methods of capturing the up front image of a customer – adding at least one additional camera to each branch office employing photo first software technology or acquiring a photo kiosk for each office. According to the vendors, the first method would cost an estimate of \$1M to \$1.1M for additional equipment and software updates. The second method is self-serve photo kiosk. This kiosk is an interactive data and image collection booth where the customer is responsible for entering minimal data (as outlined by the agency) and upon completion of entering the data, a receipt is printed with the customer's image and bar code. Upon reaching the service window, the customer receipt is scanned and the customer data and image populates the license system. The kiosk method requires minimal interaction with staff upon the customer entering the building whereas the photo capture station method requires a staffing resource. The initial estimated cost to the agency would be approximately \$75,000 per unit. Total costs for 15 units would be \$1.1M to the agency.

To summarize, if the agency adopts up front photo capture technology, all citizens requesting a license or non-driver credential will be inconvenienced as each person would need to visit a branch or mobile unit site before any credentials could be issued. Implementation of this technology, which is required by the REAL ID Act of 2005, will carry a rather significant fiscal note: \$2.3 M to \$2.5 M. (Appendix B – Cost Analysis)

SECTION 4 – RECOMMENDATION

While the Department of Homeland Security has made \$1,023,911 (FY08) and \$833,717 (FY09) in grant money available to implement the REAL ID Act of 2005, 29-A MRSA § 1411 prohibits the State from participating in that Act, which raises the question whether the acceptance and expenditure of such federal funds contravenes that statutory prohibition. In addition, those grant funds may not be used to hire additional manpower resources.

Based on this and the facts that the agency currently has processes in place that effectively meet duplication avoidance such as image verification by staff, signature verification from various documents, and an offline process for questionable situations, as well as the significant fiscal impact to implement any or all of these technologies, the Bureau of Motor Vehicles respectfully recommends that considerations be made to delay employment of such technologies.

Appendix A

Public Law, Chapter 648, 123rd Legislature, Second Regular Session

H.P. 1669 - L.D. 2309

An Act To Enhance the Security of State Credentials

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 29-A MRSA §1301, sub-§2-A is enacted to read:

2-A. Legal presence requirement. The Secretary of State may not issue a license to an applicant unless the applicant presents to the Secretary of State valid documentary evidence of legal presence in the United States.

Sec. 2. 29-A MRSA §1406, sub-§9 is enacted to read:

9. Expiration of license; lawfully present noncitizens. Notwithstanding any law to the contrary, a license issued to an applicant who is not a citizen or a legal permanent resident of the United States expires coterminously with the applicant's authorized duration of stay or the otherwise applicable expiration date of the license under this section, whichever occurs first. A license issued under this subsection must be valid for a period of at least 120 days.

Sec. 3. 29-A MRSA §1410, sub-§8 is enacted to read:

8. Legal presence requirement. The Secretary of State may not issue a nondriver identification card to an applicant unless the applicant presents to the Secretary of State valid documentary evidence of legal presence in the United States.

Sec. 4. 29-A MRSA §1410, sub-§9 is enacted to read:

9. Expiration of nondriver identification card; lawfully present noncitizens. Notwithstanding any law to the contrary, a nondriver identification card issued to an applicant who is not a citizen or a legal permanent resident of the United States expires coterminously with the applicant's authorized duration of stay or 6 years, whichever is the shorter period of time. A nondriver identification card issued under this subsection must be valid for a period of at least 120 days.

Sec. 5. Rulemaking; legal presence for license and identification cards; draft rules. No later than November 15, 2008, the Secretary of State shall adopt rules governing what documents constitute valid documentary evidence to establish legal presence pursuant to the Maine Public Law, Chapter 648, 123rd Legislature, Second Regular Session Revised Statutes, Title 29-A, section 1301, subsection 2-A and Title 29-A, section 1410, subsection 8. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

Sec. 6. Participation in verification program; report. Notwithstanding the Maine Revised Statutes, Title 29-A, section 1411, the Secretary of State shall by December 1, 2009 participate in the federal Systematic Alien Verification for Entitlements Program maintained by United States Citizenship and Immigration Services for the exclusive purpose of verifying the lawful presence of noncitizen applicants for driver's licenses or nondriver identification cards. No later than January 30th of each year, beginning in 2010, the Secretary of State shall report to the joint standing committee of the Legislature having jurisdiction over transportation matters regarding the operation and effectiveness of the Systematic Alien Verification for Entitlements Program.

Sec. 7. Development of method to avoid duplication. Notwithstanding the Maine Revised Statutes, Title 29-A, section 1411, the Secretary of State shall study the most cost-effective way, such as facial recognition or fingerprint technology, to ensure that an applicant does not have more than one driver's license or nondriver identification card issued by the State. The Secretary of State shall make a written report of findings and recommendations to the Governor and to the joint standing committee of the Legislature having jurisdiction over transportation matters no later than October 1, 2009.

Sec. 8. Photographs. Notwithstanding the Maine Revised Statutes, Title 29-A, section 1411, the Secretary of State shall study the most cost-effective way to develop and implement policies and procedures in order to take and maintain photographs of applicants at the time an application for a driver's license or nondriver identification card is submitted. The Secretary of State shall make a written report of findings and recommendations to the Governor and to the joint standing committee of the Legislature having jurisdiction over transportation matters no later than October 1, 2009.

Sec. 9. Federal REAL ID Act of 2005; repeal. If the United States Congress repeals the federal REAL ID Act of 2005, the Secretary of State shall submit proposed legislation to the joint standing committee of the Legislature having jurisdiction over transportation matters that returns Maine law regarding the issuance of driver's licenses and nondriver identification cards to what it was prior to the effective date of this Act. Upon receipt and review of that proposed legislation, the joint standing committee may submit a bill to the session of the Legislature in which the Secretary of State submits that proposed legislation.

APPENDIX B: Cost Analysis

DUPLICATION AVOIDANCE (Section 7, PL 2007, Chapter 648)				
<i>Item</i>	<i>Computation</i>	<i>Cost</i>	<i>Sub Total</i>	<i>Total</i>
Facial Recognition:				
Facial Recognition System - Biometric Module Maintenance		\$65,000		
Facial Recognition System - Gated Issue Module Maintenance		\$15,000		
Cost to implement technology update by vendor	\$0.67 per card	\$670,000		
Motor Vehicle Investigator (including benefits)	\$76,067	\$76,067		
Investigator Initial Outfitting	Install Law Enforcement Radio, Emerg. Lights, & Siren = \$6,025. Weapons = \$932. Body Armor, holster, and badges = \$1,090	\$8,047		
Vehicle (Class 20-2) for Investigator	1 @ \$16,511 (est FY10 cost)	\$16,511		
Secure Laptops	\$1,500 unit cost + \$625 unit software and security = \$2,125 total unit cost	\$2,125		
2-4 Customer Service Reps	\$49807.83/ position	\$99,615.66 to \$199,234.32		
Sub Total			\$952,365.66 to \$1,051,981.32	
Finger Printing:				
Equipping Workstations including cost of software (Scanners)	\$2000 each	\$ 160,000.00		
Cost to implement technology update by vendor	\$0.210 to \$0.535 per card	\$210,000 to \$535,000		
Fingerprint Kit (Employee background checks)	1 @ 500.00	\$500		
3-6 Customer Service Reps	\$49807.83/ position	\$149,423.49 to \$298,846.98		
Sub Total			\$519,923.49 to \$994,346.98	

PHOTOGRAPHS (Section 8, PL 2007, Chapter 648)				
<i>Item</i>	<i>Computation</i>	<i>Cost</i>	<i>Sub Total</i>	<i>Total</i>
Up Front Photo Capture:				
Up Front Photo Capture IT Analysis	\$85/hr for 200 hrs	\$17,000		
Additional Cameras		\$1,000,000 to \$1,100,000		
15 Photo Kiosks	\$75,000 / unit	\$1,125,000		
1 OAII - Exams	\$4,5144.46 / position	\$45,144.46		
2-4 Customer Service Reps	\$4,9807.83 / position	\$99,615.66 to \$199,231.32		
Modifications to Offices	Costs Undetermined			
			\$2,286,760 to \$2,486,376	
<i>Sub Total</i>				
<i>Grand Total for Implementation of Facial Recognition, Fingerprinting and Upfront Photo Capture</i>				\$3,759,050 to \$4,532,705