

Evaluation of the AAMVA E-title Proof of Concept

Version 1.0

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This document and associated work products were produced by Clerus Solutions, LLC as Program Manager to the American Association of Motor Vehicle Administrators (AAMVA) E-Titling Task Force under contract to AAMVA.

Executive Summary

When defining the scope of the E-title Proof of Concept (POC), the E-title Task Force divided up e-titling into the following steps:

1. **CREATE MCO** – A Manufacturer creates a Manufacturer’s Certificate of Origin (MCO) for a newly manufactured vehicle and sends electronic MCO data to the MCO file at the National Insurance Crime Bureau (NICB).
2. **SEND MCO TO DEALER** - Manufacturer sends electronic MCO data and an electronic invoice to the dealer to whom the new vehicle is shipped.
3. **DEALER TRADES/REASSIGNMENTS** – as dealers trade vehicles among themselves, prior to first time sale, an electronic means to track trades/reassignments can be implemented.
4. **VERIFY CONSUMER IDENTITY** - Dealers verify the identity of the consumer, whether an individual or an organization.
5. **TITLE APPLICATION** - Dealer submits an application for the first title to the state vehicle titling agency (VTA).
6. **VERIFY TITLE INFORMATION** - VTA verifies information on the title application against the MCO file.
7. **CHECK NMVTIS** - VTA checks NMVTIS to verify that the vehicle is not already titled or stolen, and whether there is any history including brand, junk, salvage or insurance (JSI) reported information.
8. **LIEN NOTIFICATION** - VTA uses an Electronic Lien and Title (ELT) application or other interface in a bidirectional communication where the State notifies the Lienholder of the perfected lien and the Lienholder notifies the State of a lien release.
9. **CREATE TITLE** – If the prior steps do not indicate any problems, the VTA issues the title and stores the title information in its internal data stores.
10. **NOTIFY CONSUMER** - VTA notifies the consumer that an electronic title was issued. The VTA may also provide a means for consumers to access their electronic title via a web site application.

Once defined, these ten steps were grouped into four modules:

- Steps 1, 2 & 3 – Module 1 – MCO File Maintenance
- Steps 5, 6, 7 & 9 – Module 2 – First Title Processing
- Step 8 – Module 3 - Lien Processing
- Steps 4 & 10 – Module 4 – Optional Processes

After refining the POC based on cost/benefit and other factors, Modules 2 & 3 became the focus of the POC. Modules 1 & 4 were neither implemented nor evaluated.

Module 1 – MCO File Maintenance

The reason why this Module was not implemented in the POC relates to the lack of interest by manufacturers and dealers to establish an electronic means to track dealer trades/reassignments. Since there was no electronic means for states to verify the chain of ownership of the vehicle, states felt that implementing an electronic verification of the MCO did not provide enough benefit to justify the cost.

Module 2 – First Title Processing

For vehicles bought and sold in the same state, first title processing can be and has been implemented successfully.

More work needs to be done to facilitate first title processing in the situation where the buyer and seller reside in different states.

Module 3 – Electronic Lien Processing

Electronic lien processing can and has been implemented successfully for first time titles.

Module 4 – Optional Processing

Electronically verifying the consumer's identity was an optional feature of the POC, one that was not implemented or evaluated by the participants. This feature will get more focus as the states undertake the initiative to establish electronic odometer disclosure processes.

Electronically notifying consumers that an electronic title was issued was also an optional feature of the POC that was not implemented or evaluated. Participants in the POC determined that a nationwide approach to this feature was unnecessary.

Conclusion

Intra-state use of Modules 2 and 3 will continue to grow because the benefits are readily obvious.

The success of a ubiquitous, nationwide, inter-state e-titling program rests on whether or not the involved parties are motivated enough to expend the resources to implement and maintain the information systems needed to support such a program. To date, that motivation has not surfaced.

Next steps toward a nationwide e-titling program, including electronic odometer disclosure, are described in the E-titling Roadmap, one of the deliverables from the POC.

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1 DESCRIPTION OF THE POC

1.1

Document Purpose

This document provides an evaluation of the AAMVA E-title Proof of Concept (POC) Program. It contains information about the experiences of the POC participants, their lessons learned, and their recommendations on future efforts to use technology to improve the vehicle titling process.

1.2

Document Status

Table 1 E-Title Roadmap

Item	Status
Document Title	Evaluation of the AAMVA E-title Proof of Concept
Disposition/Status	Final
Primary Contact, Organization	Patrice Aasmo, AAMVA
Secondary Contact, Organization	Cathie Curtis, AAMVA

1.3

Report Revision History

Table 2 Document Revision History

Version	Date	Author(s)	Description of Changes	Approval Date
0.1	1/16/2014	AAMVA PMO	Draft Outline	
0.2	1/23/2014	AAMVA PMO	First Complete Draft	
0.3	1/27/2014	AAMVA PMO	Second Draft	
1.0	2/18/2014	AAMVA PMO	Final	February 18, 2014

1.4

References

1. E-title Proof of Concept Definition
2. AAMVA E-Titling POC Project Management Plan

2 BACKGROUND

The concept of eliminating the paper processes used in vehicle titling in favor of electronic record exchange has been a focus for state vehicle titling agencies since the early 1990's. Electronic tools have since been created to increase efficiencies for specific interactions between vehicle titling agencies (VTAs) and various stakeholders. For example:

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- For the interaction between VTAs and lien holders, some states implemented some form of Electronic Lien & Title system (ELT).¹
- For the interaction between VTAs and vehicle dealers, some states implemented some form of an electronic title application system.²
- For the interaction among and between VTAs, some states have implemented the National Motor Vehicle Title Information System (NMVTIS).³

To pilot test the elimination of the paper MCO, Michigan tested a paperless MCO system. ⁴

To date, the states involved developed and used these electronic tools independently, and little consideration was given to their suitability for use by other states. Also, previous to the efforts described in this document, more comprehensive solutions that could be widely implemented across the states and with the other stakeholders in the vehicle titling process have not been successful in producing a nationwide e-titling program.

In 2011, AAMVA initiated the E-Titling Program with the intent of fostering a cohesive paperless title environment across the US. The first step taken by AAMVA was to define a Proof of Concept (POC). That definition was completed in March 2012. Over the summer of 2012, AAMVA began the process of evaluating the POC.

A “Proof of Concept” is not the same thing as a “Pilot”. A POC is an attempt to prove the feasibility of a concept for solving a problem or set of problems, while a Pilot validates a particular implementation of a concept to determine if that implementation is ready for widespread use in production. The POC is generally smaller and allows the participants more latitude in their efforts. The Pilot is a much more structured activity, and may be building on earlier work done in a POC.

To prove the feasibility of a concept, the POC seeks answers to the following two key questions:

- Can the concept be successfully implemented?
- If the concept is implemented, will it improve productivity and effectiveness for the end users?

To determine if a POC is successful, steps must be developed to define the criteria for a successful solution, evaluate the solution and then make a decision based on the results to move forward with the solution. The E-Titling POC was originated with the intent to perform these three actions regarding the implementation of a comprehensive electronic titling process.

¹ Data exchange standards exist for ELT, but some states have chosen to develop their own data exchange protocols.

² There are no nationwide standards for the vehicle title application system.

³ All states that use NMVTIS must adhere to nationwide data exchange standards.

⁴ The Paperless MCO project has not been used in many years.

3 PARTICIPANTS AND ROLES

The E-Titling POC involved many participants. These participants provided invaluable insights concerning the development and widespread use of electronic titling processes. From the beginning it was clear that the POC would require the participation not only of the state representatives, but also of a variety of other stakeholders.

The motivation, availability, and participation of entities involved in each function within the vehicle lifecycle were critical to the E-Titling Proof of Concept. Engagement from each of these functional areas ensured development of a more effective concept and a better evaluation of that concept. Although there was interaction with federal government agencies about the potential benefit gained to them through electronic titling, the state administrators indicated a preference that any concept developed should stipulate that the E-Titling Program ultimately developed remain under the control of the state administrators.

3.1.1 State Participants

A guiding principle for the POC was that states' Vehicle Title Administrators would lead the effort while encouraging participation and support from the industry involved in the vehicle lifecycle administration. Representatives from state vehicle titling agencies (VTAs) served on the E-Titling Task Force (hereafter referred to as the Task Force) that guided the POC effort. The Task Force was supported by an AAMVA Project Team, made up of AAMVA resources, and also by a project team from Clerus Solutions working under contract with AAMVA.

The following states participated in the E-Titling POC:

- South Dakota
- Virginia
- Arizona
- Florida
- Pennsylvania
- Texas
- Iowa
- Maryland
- South Carolina
- Vermont
- California
- Wisconsin
- Delaware

3.1.2 Industry Participants

Industry participation in the E-Titling Proof of Concept is essential to realizing the opportunity for a complete vehicle lifecycle administration process. State VTAs recognized the importance of the role our industry partner's bring to the success of the POC and the voice they carry to encourage broader participation within their respective associations. Representatives from automobile manufacturers and dealers, lien holders, fleets managers, and federal resources provided valuable assistance to the Task Force.

4 DEFINING THE PURPOSE, SCOPE AND OBJECTIVES

4.1

Purpose

The management of the full lifecycle of a vehicle, from its manufacture until its demise, involves a complex array of data exchanges that are prone to errors and delays. The purpose of the E-Titling POC was to assess the viability of an electronic titling process that could be widely implemented among the states, and whose continued development would eventually facilitate the tracking a vehicle from “cradle to grave”. The POC was seen as an excellent strategy for mitigating the risk involved in such a large scale effort because if any issues arose they could be addressed before the development and widespread implementation of a comprehensive electronic issuance process.

4.2

Scope

Developing and evaluating a conceptual framework for the totality of electronic titling for all vehicles from “cradle to grave” would have exceeded the resources available to the POC effort. Therefore, the Task Force decided to focus on developing and evaluating a concept for a discrete portion of the overall process, and that concept could then serve as the foundation for further development of e-titling.

To keep the E-Titling POC to a manageable size, the Task Force limited its scope to the titling of new motor vehicles that are being titled for the first time. For the purpose of the POC, “new motor vehicles” was defined as new passenger vehicles, SUVs and property carrying vehicles with a GVWR of less than 10,000 pounds. These “new motor vehicles” were to be produced by NHSTA-approved manufacturers of vehicles available for sale in the U.S. that conform to the federal motor vehicle standard 17-Digit vehicle identification number. Motorcycles, trucks (GVWR over 10,000 pounds), and trailers were not considered in scope for the POC.

4.3

Objectives

The objectives for this POC changed somewhat over the course of the effort. As the Task Force reviewed and discussed how to establish the electronic records processing at the heart of the POC effort, they gained a new understanding of what could and should be done. This new understanding led to changes in the planned activities and deliverables that would result from the POC. Ultimately, the primary deliverable of the POC are the following:

- The E-Titling Roadmap
- A set of E-Titling data exchange standards
- Specifications for the MCO Verification
- This E-Titling Evaluation

5 THE CONCEPT FOR ELECTRONIC PROCESSING OF VEHICLE TITLES

The Task Force identified ten processing steps that comprise the data exchanges needed for this concept. These ten steps track the vehicle from its manufacture until it is titled in the name of the first consumer to own it, including recording any applicable liens.

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The ten processing steps are listed and explained in the following paragraphs. Each processing step represents a complete transaction, and a two-way flow of information is assumed, even if the response is simply to acknowledge receipt of the information.

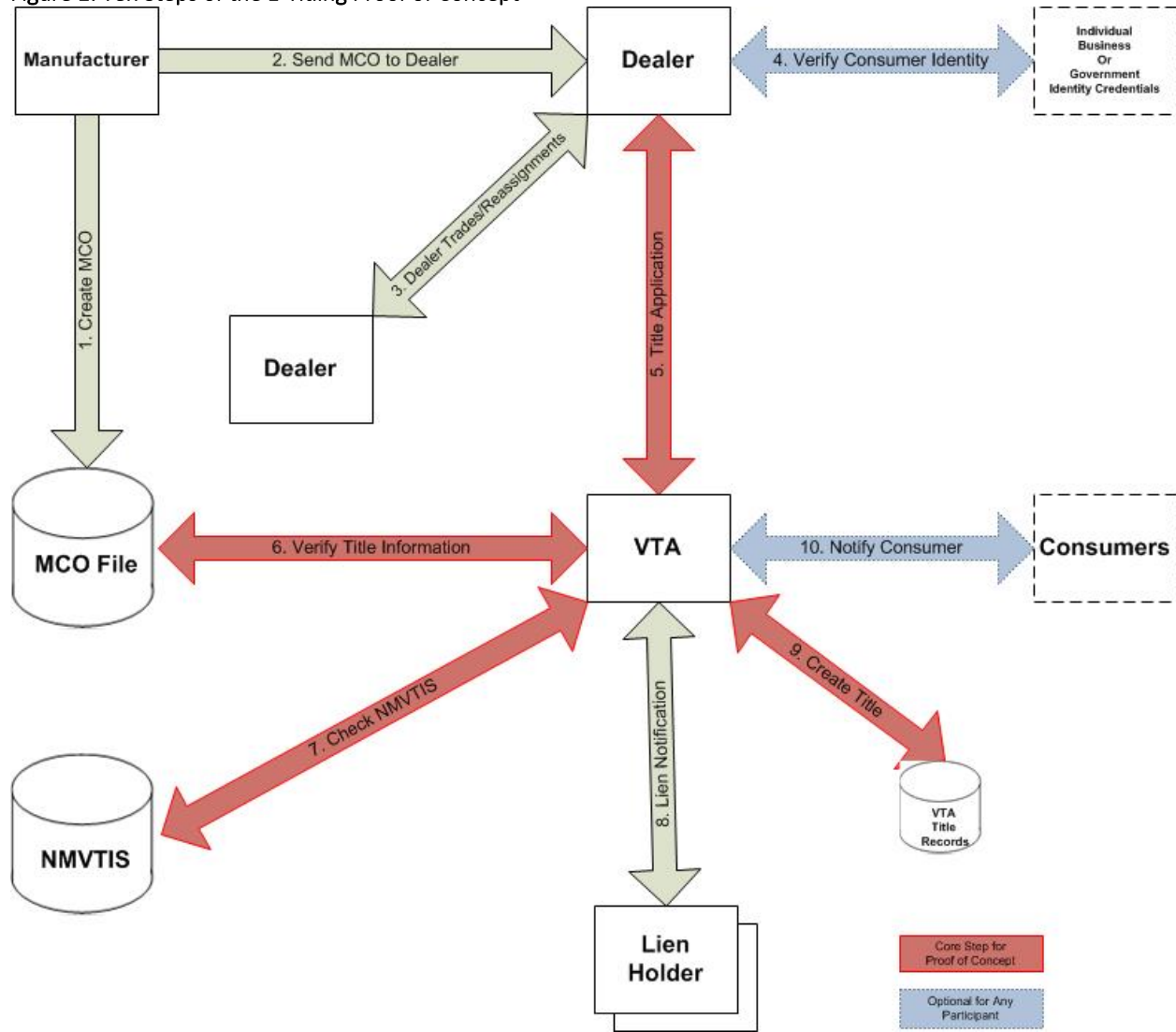
1. **CREATE MCO** - Manufacturer creates a MCO for newly manufactured vehicle and sends MCO data to the MCO file at the NICB.
2. **SEND MCO TO DEALER** - Manufacturer sends MCO data and an electronic invoice to the dealer to whom the new vehicle is shipped.
3. **DEALER TRADES/REASSIGNMENTS** - Dealers will continue to use the paper MCO to record and track dealer trades/reassignments. Dealers may, among themselves, choose to implement an electronic means to track trades/reassignments.
4. **VERIFY CONSUMER IDENTITY** - Dealers verify the identity of the consumer, whether an individual or an organization. (This step is Optional.)
5. **TITLE APPLICATION** - Dealer submits an application for the first title to the state vehicle titling agency (VTA).
6. **VERIFY TITLE INFORMATION** - VTA verifies information on the title application against the MCO file.
7. **CHECK NMVTIS** - VTA checks NMVTIS to verify that the vehicle is not already titled or stolen, and whether there is any history including brand, junk, salvage or insurance (JSI) reported information. On the date of this documentation, Junk, Salvage and Insurance information is part of the NMVTIS standalone inquiry, but is not yet reportable data via the NMVTIS online integrated inquiry.
8. **LIEN NOTIFICATION** - VTA uses an Electronic Lien and Title (ELT) application or other interface in a bidirectional communication where the State notifies the Lienholder of the perfected lien and the Lienholder notifies the State of a lien release.
9. **CREATE TITLE** – If the prior steps do not indicate any problems, the VTA issues the title and stores the title information in its internal data stores.
10. **NOTIFY CONSUMER** - VTA notifies the consumer that an electronic title was issued and may provide access via a web site application. (This step is Optional.)

Figure 1 depicts how these ten steps fit together. In Figure 1 and the subsequent figures, the following keys will aid in understanding the diagrams:

- Unidirectional arrows indicate a processing step in which the sender receives only an acknowledgement receipt.
- Bidirectional arrows indicate a two-way flow of information.
- Red arrows indicate those processing steps that are core to the E-Titling Proof of Concept.
- Blue arrows indicate processing steps that are optional for any participant.

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Figure 1: Ten Steps of the E-Titling Proof of Concept



After identifying these ten steps, the Task Force determined that the ten processing steps could be divided into four modules by grouping related steps. Each of these four modules could logically be implemented as a discrete subset of the overall effort. After devising the four modules, the Task Force determined that Module 2 contains the core functions on which the E-Titling POC would focus. The following sections explain each of the four modules in greater detail.

5.1

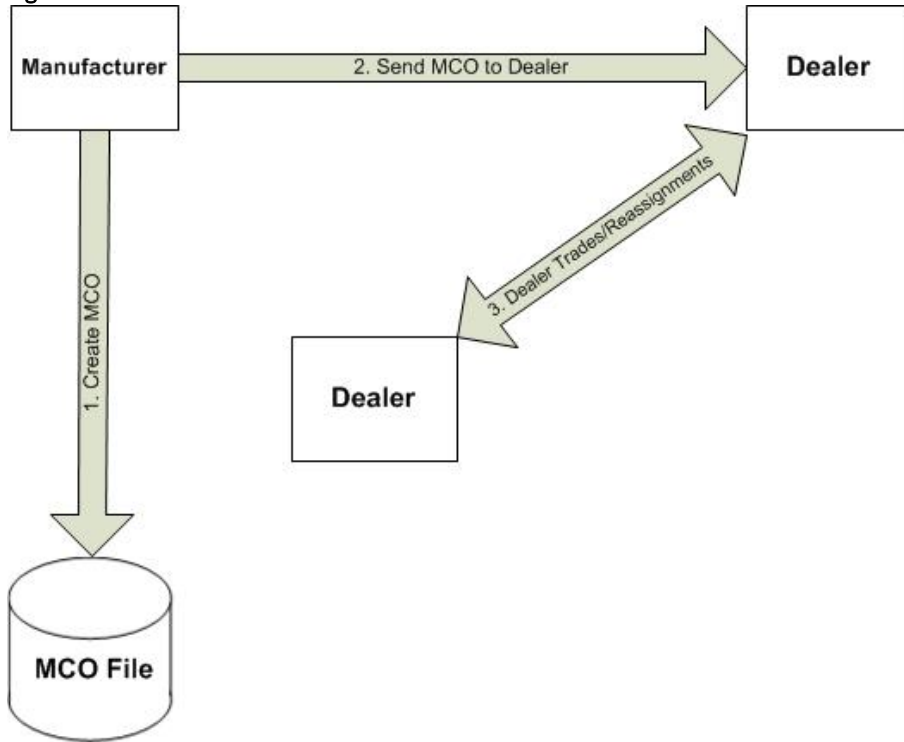
Module 1 – MCO File Maintenance

Module 1 – MCO File Maintenance comprises the processing steps necessary to add MCO data for a newly manufactured vehicle to the MCO file and to update the information about that vehicle until the VTA issues the first title for that vehicle. Figure 2 depicts the relationship of the processing steps in this module. Module 1 includes the following processing steps:

- Step 1 - CREATE MCO
- Step 2 - SEND MCO TO DEALER

Step 3 – DEALER TRADES/REASSIGNMENTS

Figure 2: MCO File Maintenance



5.1.1 Create MCO - Manufacturer creates a MCO for newly manufactured vehicle and sends MCO data to the MCO file at the NICB

An MCO can be likened to a birth certificate for a motor vehicle. When a Manufacturer produces a new vehicle, it sends MCO information to the (National Insurance Crime Bureau) NICB, which adds it to the MCO file. The MCO file then becomes the primary means of tracking “ownership” of the vehicle until it is titled for the first time. The MCO information includes data like the manufacturers identification, date of manufacture, and the Vehicle Identification Number (VIN). Currently during this step, some Manufacturers provide the identification of the Dealer to whom the vehicle is shipped.

Many vehicle manufacturers currently send electronic data regarding newly manufactured vehicles to the NICB in the form of Shipping and Assembly Records. The data in these records is very similar to the data contained on printed MCO documents, therefore the MCO file will be used to electronically verify MCO information at the time of first time title.

5.1.2 Send MCO to Dealer - Manufacturer sends MCO data and an electronic invoice to the dealer to whom the new vehicle is shipped

When the Manufacturer ships the vehicle to a dealer, the manufacturer also sends MCO information and an invoice to the dealer. If the Manufacturer has not already done so, it will send an update to the MCO file with the identification of the Dealer to whom the vehicle is shipped. Until such time that manufacturers can send an electronic MCO to every dealer in every state, the manufacturers will likely continue to send paper MCOs to the dealers. The paper MCO would be

needed to support dealer reassignments from a dealer who can use electronic MCOs to a dealer who cannot.

5.1.3 Dealer Trades/Reassignments

A Dealer will sometimes exchange a vehicle with another Dealer. This exchange between Dealers is called a “dealer trade or reassignment”. The Task Force was not able to determine the best way for the reassignment process to work if all MCOs were strictly electronic records. The most difficult problem involves maintaining a chain of ownership as the vehicle moves from dealer to dealer. Lack of this information could prevent an attempt to validate an MCO against the NICB’s MCO file because the dealer information does not match. The obvious solution of updating the MCO file with the new dealer information is not, at least at present, feasible since there is no mechanism to send the information to the NCIB nor for the NICB to apply the updated information to the MCO file.

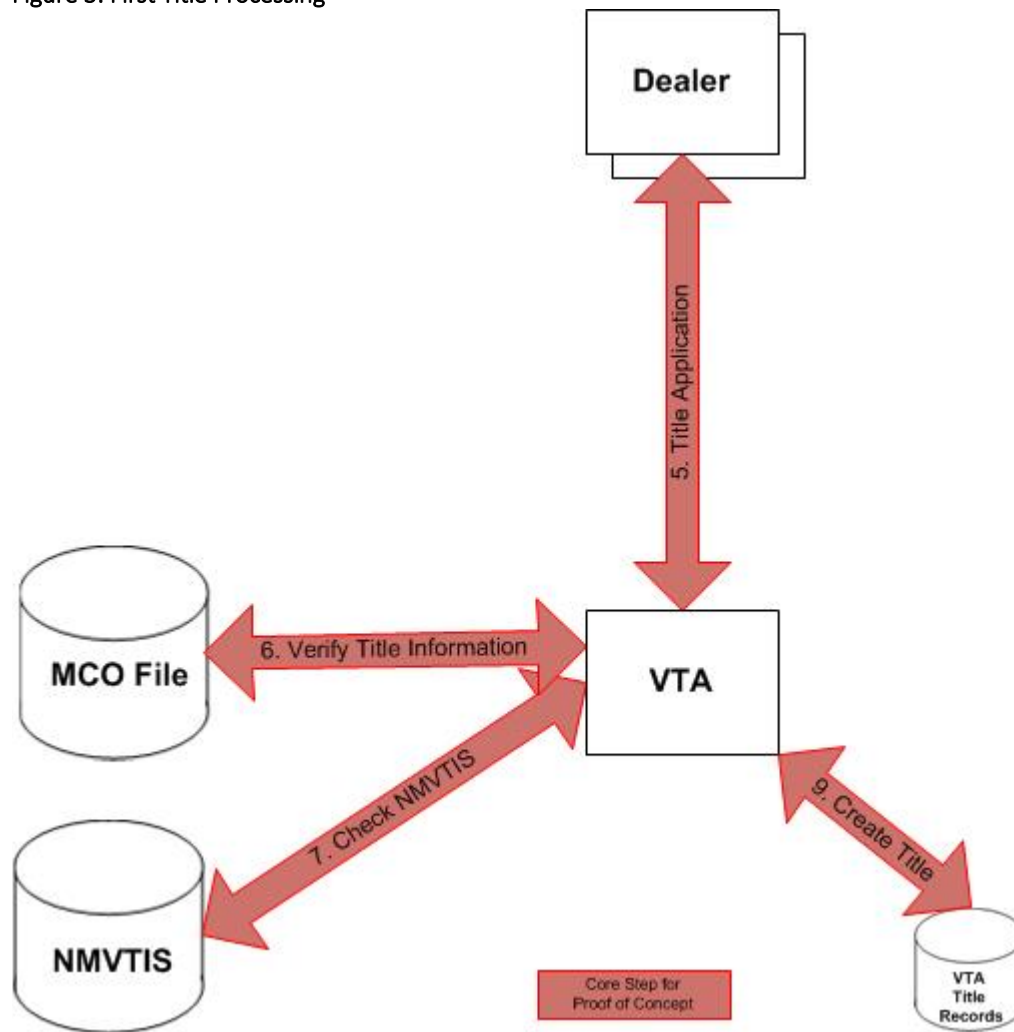
5.2

Module 2 – First Title Processing

Module 2 – First Title Processing comprises the steps necessary to issue the first title for the vehicle when ownership passes from the Dealer to the Consumer. The Task Force determined that this module contains the core processes for the POC. Figure 3 depicts the steps necessary for the issuance of the title. The four processing steps that make up Module 2 are as follows:

- Step 5 - TITLE APPLICATION
- Step 6 - VERIFY TITLE INFORMATION
- Step 7 - CHECK NMVTIS
- Step 9 - CREATE TITLE

Figure 3: First Title Processing



5.2.1 Title Application - Dealer submits an application for the first title to the VTA

Many states allow vehicle dealers to electronically submit title applications today. There are two methods that states have used to accept electronic title applications:

- They allow dealers direct access to state-developed software that allows the dealers to enter data into an electronic title application.
- Dealers work with a vendor that has developed an interface with the state system. In this case, the dealer enters data into the vendor-supplied software and that software sends the electronic title application to the state.

For states that allow direct access to state-developed software, the e-title data standards from AAMVA could be used:

- For all title application data

Or

- For just the new data elements that have been created to support the e-title environment.

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To provide all of the capability envisioned for the concept of Module 2, when a dealer submits an electronic application for a first title, it must provide information from the MCO. The following are several ways in which a dealer could add the MCO data to the electronic title application:

- Receive electronic MCO information (if such an electronic method exists) and integrate that data with the software used to send title applications to the state vehicle titling agency (if MCO data is sent electronically by the manufacturer).

Or

- Manually enter the needed MCO data from the paper MCO and integrate that data with the software used to send title applications to the state vehicle titling agency.

Or

- Use a combination of data received electronically from the manufacturer and manually entered information from the paper MCO to send electronic title applications to the state vehicle titling agency.

When a state implements or updates its e-titling system, it is not essential that it use the AAMVA-developed e-title data element standards. However, these standards were developed to facilitate the exchange of electronic title applications across state lines, so there may be some benefit from the state using them. By having a standard, a dealership in State A could theoretically send electronic title applications to State A, State B and State C in the same format, facilitating commerce and reducing costs for the private sector.

Currently, federal regulations on the handling of odometer disclosure forms prevent any state from having an e-titling system that relies entirely on electronic records. The Task Force was unable to devise an alternative that would eliminate this manual processing, but sees great value in the development of an approach for e-odometer disclosure.

5.2.2 Check NMVTIS - VTA checks NMVTIS to verify that the vehicle is not already titled or stolen, and whether there is any history including JSI reported information.

Another of the VTAs key external interactions when issuing a title is to check NMVTIS. The VTA checks NMVTIS to establish that no title has previously been issued for the vehicle, the vehicle has not been reported as stolen, and whether the vehicle has any history including brand, junk, salvage or insurance (JSI) reported information. At the time this document was written, JSI information is part of the NMVTIS standalone inquiry, but is not reportable data via the NMVTIS online integrated inquiry. The NMVTIS data exchange that supports this function is already developed and in use by many states.

If the NMVTIS check does not identify any concerns that need investigation, then the VTA can issue the title. However, if the NMVTIS check identifies any issues, the VTA cannot issue the title until they are resolved.

5.2.3 Verify Title Information - VTA verifies information on the title application against the MCO file

In this step, the VTA would verify information from the electronic title application with the information on file with the NICB. The electronic MCO information sent by the dealer to the vehicle titling agency would be sent by the VTA to NICB. NICB would attempt to match the

information sent by the state with the data on the MCO file at NICB. The NICB would report the results of this attempt to the state. The NICB response would either indicate that the data matched, that only some of the data matched, or that no record for the vehicle could be found.

Currently, there is no existing capability to perform this validation. AAMVA worked with NICB to coordinate the development of this capability, but no actual development has taken place. After further consideration, some members of the Task Force questioned the need for including this MCO validation as a processing step in the concept. The point was made that there appears to be little fraud involved with the processing of MCO data.

5.2.4 Create Title - If the prior steps do not indicate any problems, the VTA issues the title and stores the title information in its internal data stores.

While the exact sequence of steps may vary among states, if the verifications and checks do not reveal any problems and all information is available, the VTA creates the E-Title. The VTA stores the title information in its internal data store of title records. While it may prove difficult to pinpoint, in a given state's process, the exact point in the process at which the E-Title was "issued", the key consideration is that it was issued without the printing of a paper document.

States may need to change their information systems to retain the electronic MCO information received from the dealer. Also, if the processing step of validating the MCO with NICB is retained, States may also need to store the response code.

5.3

Module 3 – Lien Processing

Module 3 – Lien Processing includes the processing necessary for the VTA to acknowledge the lien to the financial organization holding the lien on the vehicle. Figure 4 provides a graphical representation of this processing. Either before or during the POC, many of the states on the Task Force implemented electronic lien processing, but there was not a coordinated effort to gather data about the processing of liens in these states. Module 3 has only one processing step, which is the following:

- Step 8 – LIEN NOTIFICATION

Figure 4: Lien Processing



5.3.1 Lien Notification - VTA uses an Electronic Lien and Title (ELT) application or other interface in a bidirectional communication where the State notifies the Lienholder of the perfected lien and the Lienholder notifies the State of a lien release

When processing a title for a vehicle, the VTA frequently must record a financial organization’s lien on the vehicle. In some states, the VTA uses the Electronic Lien and Title (ELT) system provided by AAMVA for this purpose. However, the AAMVA ELT solution is not the only option. States have the option to choose the AAMVA ELT or another ELT solution if they wish. Some use the data exchange standards developed by AAMVA and some use their own data exchange standards. Either before or during the POC, many states implemented electronic lien processing. However, there was no formal gathering of performance data during the POC.

5.4

Module 4 - Optional Processes

Module 4 – Optional Processes consists of two processing steps that the Task Force believes some states may find value in developing. The Task Force considers these processing steps to be an optional part of the concept. States may need legislative changes before they could develop either of these processing steps. Also, it was difficult to gauge the level of interest and commitment among the POC stakeholders who would be involved in these processing steps.

Figure 5 provides a graphical depiction of the two optional processing steps included in Module 4. The two optional processing steps that make up Module 4 are not inter-related in a way that makes them a coherent subset of the overall titling process. For this reason, the Task Force decided to consider each as an independent subset of Module 4. The optional processing steps are as follows:

Module 4A (Step 4) - VERIFY CONSUMER IDENTITY

Module 4B (Step 10) - NOTIFY CONSUMER

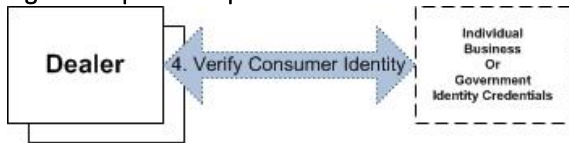
5.4.1 Module 4A (Step 4) - Verify Consumer Identity (Optional)

In this processing step, the Dealer verifies the identity of the Consumer, whether the Consumer is an individual or an organization. Dealers currently take steps to verify the identity of the customer, especially when the vehicle is being financed. This processing step would take that one step further in the development of an electronic capability to verify identity.

5.4.2 Module 4B (Step 10) - Notify Consumer (Optional)

In this processing step, the VTA would notify the Consumer that an electronic title has been issued for the vehicle. States could do this either electronically or in some sort of manual manner (e.g., by US mail). Each state should determine for itself whether or not they will notify the consumer and if they do, which means will be used.

Figure 5: Optional Capabilities



6 EVALUATING THE PROOF OF CONCEPT

Overview

Evaluating a “Proof of Concept” is not the same process as evaluating a “Pilot”. The attempt to prove the feasibility of a concept for solving a problem or set of problems is achieved by allowing the participants more latitude in their efforts. The POC evaluation is not as rigorous as the evaluation of a pilot, and the POC evaluation focuses less on collection of data and more on the participants’ reports of their experiences.

As stated above, the ten steps defined for the POC were grouped into four modules:

- Steps 1, 2 & 3 – Module 1 – MCO File Maintenance
- Steps 5, 6, 7 & 9 – Module 2 – First Title Processing
- Step 8 – Module 3 - Lien Processing
- Steps 4 & 10 – Module 4 – Optional Processes

After refining the POC based on cost/benefit and other factors, Modules 2 & 3 became the focus of the POC. Modules 1 & 4 were neither implemented nor evaluated. Also, step 6 within Module 2 was not implemented or evaluated.

Some of the states represented on the Task Force had either already implemented an electronic titling process (Module 2) or did so during the period of the POC. Similarly, some states had either already implemented electronic lien processing (Module 3) or did so during the POC. However, none of this processing was implemented as part of a coordinated program as there would have been for an actual pilot. The consequence of all this is that the POC is very different than a pilot, and therefore it cannot be evaluated in the same way.

Since there was little or no opportunity to collect data as would be done for an actual pilot, the evaluation of the POC uses information from two primary sources. The first of these is the conclusions and decisions made by the Task Force during its deliberations. The second is a survey completed by Task Force members asking about their experiences with their current processes and their thoughts about possible future implementations of those processes.

The survey was sent to all of the states that participated in the Task Force and to a number of other stakeholders. Survey responses were received from seven states; none of the other stakeholders responded. Since some states that responded have experience with the electronic processing of titles (Module 2) and liens (Module 3), they were able to provide information based on real world experiences. This is especially fortunate since the Task Force had determined that Module 2 was the heart of the concept being evaluated.

The following sections provide information that the Task Force gathered during the evaluation of the concept. The processing modules described in section 5 serve as the basis for organizing this information. In addition, there is a final section giving thoughts and recommendations from the Task Force on the next steps following the completion of the E-Titling POC.

6.1

Module 1 - MCO File Maintenance

6.1.1 Can the concept be successfully implemented?

Yes, it can. It would require the private sector (manufacturers & dealers) to provide the leadership and resources needed to make the project successful.

6.1.2 If the concept is implemented, will it improve productivity and effectiveness for the end users?

This module was intended to establish data that was to be accessed by the states in Module 2 to:

- Detect MCO fraud
- Verify the chain of ownership among vehicle dealers

Since this Module was not implemented or evaluated in the POC, its effect on the state user is unknown.

If established, this module could also be used by dealers to reduce the resources needed to enter data into state title application systems and reduce data entry errors on title applications. Again, since it wasn't implemented, its effect was not evaluated.

6.1.3 Work Completed on Module 1

This Module was not implemented in the POC because of the lack of interest by manufacturers and dealers to establish an electronic means to track dealer trades/reassignments. Since there was no electronic means for states to verify the chain of ownership of the vehicle, states felt that implementing an electronic verification of the MCO did not provide enough benefit to justify the cost.

Ideally, the states would have liked the manufacturers and dealers to work out, among themselves, a way to electronically track dealer trades/reassignments so that the chain of ownership of the vehicle could be electronically verified when the application for first time title is made (in Module 2).

Since the NICB:

- currently maintains a file of information on newly manufactured vehicles (called shipping & assembly records) and
- had worked with Michigan in the 1990's to test electronic verification of the information contained on first time title applications with information in the Shipping & Assembly file, the Task Force looked at the possibility of working again with NICB for the POC. NICB agreed to participate and AAMVA agreed to fund the development that NICB would need to complete to allow states to verify MCO information contained on a title application.

However, NICB did not have a method to allow updates to be posted to its shipping & assembly file based on dealer trades/reassignments nor were they certain that they would allow every vehicle dealer in the US to update those records.

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In addition, manufacturers and dealers did not take any initiative to work together or to work with NICB to establish an electronic means to track chain of ownership.

Once it became obvious to the states participating in the POC that the electronic check of the Shipping & Assembly file would not provide information regarding dealer trades/reassignments, they decided not to expend state or AAMVA resources to establish that transaction⁵. As a result, Step 6 within Module 2, was dropped from the POC.

It is possible to establish the electronic verification process envisioned by the states in the future. It would require the private sector (manufacturers & dealers) to provide the leadership and resources needed to make the project successful. It should be noted that manufacturers and dealers could develop and implement an electronic file of dealer trades/reassignments that either does or does not include the NICB.

Until such time that a method is developed by the private sector, states will proceed with E-titling programs that do not include an electronic verification of the information contained on MCO's.

Special Note: With respect to the electronic verification of data against the shipping & assembly file, it may prove challenging to offer a cost benefit analysis because of the lack of direct linkage between where the money is spent and where the benefit results. For example, improvements to the MCO file would require expenditures by the manufacturers and the NICB, but they would not see appreciable benefits directly in their MCO processing until all states and all franchise dealers use electronic processes instead of paper (expected to be many years in the future). However, it is logical to suggest that such an investment would allow the states to prevent and deter MCO related fraud. This would in turn decrease the incidence of vehicle theft, one of the objectives for which the NICB was created. It would also, at some point in the future, reduce costs for the manufacturers in that they would be able to stop producing and using paper MCO's.

6.1.4 State Feedback on Module 1

6.1.4.1 Value to a State of Performing MCO Verification Check

Most of the states felt that there was value to electronically verifying the MCO. For example, verifying the MCO is an effective way to uncover discrepancies at the time the title is created. At least one state would prefer to retrieve data from the MCO file to populate its title record rather than using data manually keyed by state or dealer employees. However, since a major reason for states to look at the MCO is to be able to confirm the dealer's ownership of the car being sold, not being able to track dealer trades/reassignments significantly decreases the value of doing an MCO verification check.

⁵ The other reason to electronically check the shipping & assembly file is to detect MCO fraud. The states in the POC did not believe that MCO fraud happened frequently enough nor had enough impact to justify the cost to AAMVA and the states to develop and operate the electronic transaction.

Also, not every state saw value in electronically verifying the MCO, primarily because of their perception that there is not much fraud involving MCOs.

6.1.4.2 Importance of Tracking Movement of New Vehicles among Dealers

States agreed that for it to reach its full potential, an MCO verification check must include validation of information about dealer transfers/swaps. While not all states require this, some state's laws require them to closely monitor the chain of ownership and odometer disclosures for as yet untitled vehicles as those vehicles move from dealer to dealer.

6.1.4.3 Barriers to Implementation

States see the following as barriers to implementing an effective MCO verification check:

- Lack of key information, such as dealer trades/reassignments
- Lack of leadership from manufacturers and dealers

6.2

Module 2 - First Title Processing

The answers to the primary evaluation questions vary depending on if they are applied to an intra-state implementation or to an inter-state implementation. For that reason, the two levels of implementation will be discussed separately.

6.2.1 Can Module 2 be implemented on an intra-state basis?

On the intra-state level, it is clear that Module 2 can be successfully implemented. Even prior to this POC, states had implemented some of the steps included in Module 2. During the POC, one of the states implemented all of Module 2.

6.2.2 If the Module is implemented on an intra-state basis, will it improve productivity and effectiveness for the end users?

All of the states which have implemented some portion of Module 2 feel that they have saved resources and increased productivity. Unfortunately there was not an opportunity to gather and analyze data from before and after the implementations, so the conclusions reached rely on the observations of the states involved. Participating states reported many positive observations about their implementations, and these observations are detailed below.

6.2.3 Can Module 2 be implemented on an inter-state basis?

It is more difficult to answer whether electronic title processing can be successfully implemented on an inter-state basis. Certainly, the Task Force did not discover any technical reasons why this could not be done. A good deal of development work has been done in areas such as the development of data standards and communications links, and the additional work needed would all fall within the realm of well-established technologies. However, the successful implementation of ubiquitous electronic title processing on an inter-state basis will require a high level of commitment and cooperation from a large number of stakeholders. This POC was able to bring some of the stakeholders together, but the required level of commitment and cooperation has yet to result.

6.2.4 If the Module 2 is implemented on an inter-state basis, will it improve productivity and effectiveness for the end users?

The members of the Task Force believe there would be real benefits to implementing electronic processing of titles on an inter-state basis. However, until an attempt is made to pilot such an implementation, no conclusions can be offered regarding benefit to the end user.

Implementation of Module 2 on an Inter-state basis means that a consumer buys a vehicle from a dealer that is not within the state where the consumer lives. For example, when a person that lives in State A, buys a vehicle from a dealer in State B. In this case, the consumer would need to get a State A vehicle title.

Considerations as to whether or not the transaction is conducted electronically include:

- Is it cost effective for the dealer in State B to develop and maintain an electronic interface to State A's title application system?
- Would State A's VTA allow the dealer in State B access to the State A title application system?

The states involved in the POC directed AAMVA to develop a nationwide data standard for data elements that could be used to support electronic title applications. Those standards were developed by AAMVA as part of the POC. If states were to develop electronic vehicle title application systems that use those standards, it would make electronic inter-state vehicle title applications more cost effective for dealers, thereby increasing the likelihood that dealers would expend the resources needed to develop and maintain such an interface.

6.2.5 State Feedback on Module 2 (Intra-state implementation only)

6.2.5.1 Benefits from Having Implemented Module 2

At least two of the states responding to the survey have implemented an electronic first title processing capability that closely parallels the concept described in Module 2. In both cases the implementations were too recent for the state to provide any data about the realized benefits. However, both of these states are large, and they are expecting the benefits to be significant.

Three other states indicated they had implemented some Module 2 features but had not completely implemented all of Module 2. One of these states required their dealers to enter information about the sale on-line, and the state then used that information to track whether or not the new owner had applied for a title. In another state, all franchise dealers and many independent dealers used one of the four vendors in the state's On-Line Dealer program, which provides for the transfer of title information to the VTA electronically.

One state pointed out that the implementation of an electronic title processing capability would likely improve the quality of the information in the state's files, which would filter down to improvements in the quality of data that the state provides to NMVTIS.

None of the states with partial implementations were able to provide data about the benefits of what they had done so far, but they are enthusiastic about continuing with further development because they expect the benefits will be significant.

6.2.5.2 Problems While Implementing Module 2

One of the states that had fully implemented electronic first title processing reported that gaining NHSTA approval for electronic odometer disclosure was one of their more challenging problems. Other problems that this state reported include the challenge of designing a secure, efficient system and the cost to the state.

One state that implemented a partial process encountered a problem since some smaller dealers were not required to implement the electronic processing. It then became a problem when a vehicle was transferred from a participating dealer to one of these smaller dealers since the smaller dealer needed a paper copy of the MCO.

6.2.5.3 Interface of State's Electronic Processing of Titles with Dealer Management Systems

States that had at least a partial implementation of electronic first title processing were asked if their system interfaced with dealer management systems. One state said they are currently handling this interface with a manual export/input process, but they are working on a fully integrated interface. Another state indicated that one of the dealers had written software that allowed vendors to interface with the dealer management system. In one state, there is no direct interface between the VTA and the dealers, but the VTA does receive information from the vendors from the On-Line Dealer program.

6.2.5.4 Expected Benefits of Implementing Module 2

States that had not yet implemented electronic first title processing, or who had only a partial implementation were asked what benefits they would expect from implementing all of Module 2.

High on the list of expected benefits was that the state would save money and resources. Not only would the state save money on the printing and mailing of the paper titles, but the state may also save on staffing needed to handle and file all the paper documents.

Another expected benefit was an improvement in the ability to track a given vehicle over its whole life cycle, or from when it was manufactured until it was junk. Such tracking would improve the state's ability to detect odometer fraud or attempts at "washing" the title to remove brands.

One state provided a detailed description of what they hoped to see happen as they continued to switch to using electronic processes for handling titles:

"(Our state) intends to continue to move toward electronic processing and online services. In time, we would like to eliminate the need for paper titles. We envision issuing 'e-Titles' to customers, much like bonds are issued now. Customers would be able to access their record. Eventually they would also be able to sell a vehicle without the need for paper documentation. The seller and purchaser (identities verified) would be able to electronically sign to facilitate a sale online. In time, we would also hope that we could interface with other states to allow this functionality across state lines."

One final benefit given was that it would satisfy the dealers' requests for electronic processing. Such requests indicate the dealers see benefit in electronic processing, but since we received no survey responses from representatives of the dealers we can only speculate as to why.

6.2.5.4.1 Cost to Implement Module 2

One state that had fully implemented electronic title processing is one of the most populous states. This state said that it budgeted \$10 million for the entire effort, which includes four phases. Implementation of the first phase, which involved only franchised dealers that sell passenger cars and light trucks, cost them approximately \$2 million.

6.2.6 Widespread Usage of Module 2

6.2.6.1 Improvements from Implementing Module 2 on an Inter-state Basis

The often expressed desire of pretty much all of the stakeholders involved in titling vehicles is for a comprehensive electronic process that is interoperable over all the states in a region or, preferably, on a nationwide basis. States were asked to describe the benefits expected from such a widespread implementation of electronic title processing. Their responses touched upon simpler processing of state-to-state transfers, faster processing, better security, saving money and resources, and better customer service.

If the VTAs can interoperate not only among themselves, but also with out-of-state dealers, this would make the processing of interstate transactions much simpler. For example, if a person owning a vehicle moves to another state, the transfer of the title from the old state to the new state could occur on-line, with neither state needing to handle paper documents. Similarly, if a person living in State A buys a new car in State B, the dealer in State B can send the title application directly to State A, possibly avoiding the need for a temporary registration in State B as well as providing the purchaser at the time of the sale with correct information about taxes and fees. In the end, processing should be easier not only for the state VTAs, but also for the dealers and purchasers. Most of the other benefits are based, at least in part, on simplifying interstate processing.

The ability to interoperate across state lines will not only simplify processing, it will also speed it up. Both the processing actions at the VTA and the communications with dealers and citizens will be faster. In many cases, in-person visits to a VTA office can be reduced or possibly eliminated entirely when processing titles across state borders.

The processing of all, or at least the bulk, of interstate transfers electronically will also improve security. Bad actors will not be able to alter or forge electronic titles the same way they currently can with paper documents. The result should be a reduction in fraud such as “washing” a title to remove a brand or rolling back the odometer on a vehicle.

The widespread implementation of electronic titling capability would likely result in improved data quality of the information in states’ files. This improved data quality would pass through to improved data quality in NMVTIS, especially if the use of NMVTIS is integrated into the plans for widespread implementation of electronic title processing

The ability to handle interstate transactions electronically should result in cost savings not only for the VTA, but also for citizens. The VTA will save money by not having to print and mail title documents, but also may save on staffing now used to receive, distribute, review, print, file, and mail paper documents. Individual citizens should also benefit. Past experience has shown that individuals are prone to losing the paper title, and often do not look for it until they are selling the vehicle or moving with it to another state. Currently, the citizen who cannot find a title will need

to obtain a duplicate paper title, which takes time and costs money, in some cases \$80 or more. With electronic titles, the citizen does not need to have the paper document, so there is no need to obtain a duplicate.

6.2.6.2 Barriers to Implementing Module 2 on an Inter-state Basis

While implementing electronic titling on inter-state basis could provide many benefits, there are a number of barriers to achieving this aspiration. States responding to the survey provided information about what they see as the barriers to this widespread implementation.

Similar to the development of other new systems, funding is an issue. The competition for resources in the states can easily prevent a VTA from participating even though it desires to do so. There may be a need for federal funding to facilitate the development of electronic titling on a large scale. Even states that are able to fund their in-state development find it difficult at best to provide funding for the multi-state activities needed to achieve interoperability.

Before states can hope to interoperate, not only among themselves but with stakeholders in other states, the states will need to achieve greater uniformity in their titling programs. At present, there are many areas where the dissimilarity among states could be problematic. For example, states have differing requirements for the data that must be provided. Another example is the lack of a consistent data interface. There is sufficient precedent for data interfaces among states that would simplify the establishment of data interfaces among the VTAs. However, states can vary significantly in ways in which they connect to other stakeholders. This makes it difficult for a stakeholder to work with multiple states.

Achieving success will take the cooperation of the VTAs and many groups of stakeholders. One of the states observed that while VTAs agree that interoperability is a worthy pursuit, there is often reluctance on the part of the VTAs to make changes to their own systems in order to achieve the level of uniformity required to interoperate.

There is also hesitancy on the part of the dealers to become involved in electronic titling efforts. Some of this hesitancy may arise from the dealers' concern that the lack of a standard interface to connect with a state will result in them needing a different configuration for each state with whom they wish to work. There may also be hesitancy from consumers born of their lack of familiarity with the new way of doing things, resulting in the need for states to engage in public education efforts.

States will need the ability to access source documents without dealer involvement for review or investigation. This will require development of the processing need to provide such access.

The last, and in the opinion of some, the most pervasive and hardest barrier to overcome, is gaining NHTSA approval for electronic processing of odometer disclosure statements. The need for an odometer disclosure statement is often tied to the processing a title. Having this process remain in a paper form tends to undermine the benefits of having an electronic titling system.

6.3.1 Can Module 3 be successfully implemented?

Yes, it can and it has been successfully implemented in a number of states, using both an AAMVA-based nationwide standard and state-proprietary approaches.

6.3.2 If Module 3 is implemented, will it improve productivity and effectiveness for the end users?

Yes, it does improve productivity and effectiveness for both the state VTA and the financial institutions that support vehicle loans. This is best described in Section 6.3.5, that describes the states' feedback in more detail.

Financial institutions that interact with states that use the AAMVA standard can reap the extra benefit of having one interface that can facilitate electronic lien information with multiple states. AAMVA's ELT Program also facilitates the inter-state exchange of lien information, for the situation where a vehicle moves from one state to another while the lien is still in force.

6.3.3 State Feedback on Module 3

6.3.3.1 Observed Benefits of Electronic Lien Processing

Most of the surveyed states have implemented electronic lien processing. Based on the responses to the survey from these states, both the states and the lien holders derived benefits from electronic lien processing.

The states believed that the implementation of electronic lien processing had reduced their own operating costs. The most easily observed cost savings resulted from not having to print and mail lien related documents. These savings can result not only from reduced costs for materials (e.g., paper and ink) and postage but also from a reduction in human resources need to handle, file, and prepare paper documents for mailing. In addition to cost savings, states reported that electronic lien processing resulted in faster turn-around time for their customers. Finally, at least one state reported a reduction in the incidence of fraudulent lien releases.

The lien holders also benefitted from the use of electronic lien processing. The elimination of paper documents saves resources for the lien holder, primarily from no longer needing to store and track those documents. The lien holders also benefit from faster turn-around times, but the notifications received are more uniform and predictable. One state has implemented their system in such a way that the lien holders can manage their liens through a direct on-line connection to the state's system.

6.3.3.2 Problems with Implementation of Electronic Lien Processing

One state reported that they had experienced little problem with the implementation of electronic lien processing, and they believed that this was due to their use of AAMVA standards as much as possible. One of the states that implemented electronic lien processing had problems with other stakeholders, including some large companies, taking a long time to join the system, and that state continues to have problems with timely processing of lien releases.

One state reported that after it had implemented electronic lien processing it continued to receive many requests for paper titles, especially from leasing companies. As a result, that state established a policy that it would only issue paper titles in the following cases:

- The owner was moving out of state
- Insurance claim/total loss
- Addition or removal of an owner
- Court order

6.3.3.3 Cost of Implementing Electronic Lien Processing

One state reported that they implemented the electronic processing of liens for \$135,000 and without any need for increased staffing.

6.3.3.4 Operating Cost Savings from Electronic Lien Processing

One state that implemented electronic lien processing linked it to the issuing of electronic titles. In this state, when there is a lien on a vehicle, only an electronic title is issued and no paper title is created. During one year following this guideline, this state avoided the cost of printing 108,000 paper titles and saved about \$45,000 in postage and handling.

6.3.3.5 More Widespread Usage of Electronic Lien Processing

6.3.3.5.1 Benefits of Implementing Electronic Lien Processing on an Inter-state Basis

All of the states responding to the survey believed that there would be benefits from implementing a standardized electronic lien process that allows the lien information to be transferred when the customer moves from one state to another. The states believed that a more widespread implementation would further reduce costs by eliminating the need for paper documents for transactions across state boundaries. The lien holders would benefit from being able to use standardized processing and communications to interact with all the states instead of having to do things differently for each state. This could reduce the reluctance of lien holders to become involved in electronic lien processing. Consumers and dealers would also experience faster lien processing.

6.3.3.5.2 Barriers to Implementing Electronic Lien Processing that allows the lien information to be transferred when the customer moves from one state to another

Despite its desirability, a state reported that they believe there are some barriers to achieving electronic lien processing on an inter-state basis. The survey indicates there are barriers that affect the state and other stakeholders in lien processing.

High on the list of barriers mentioned is the need to develop guidelines, regulations and compatible electronic processes. This includes the need to develop a process to notify a lien holder when the title is moved between states.

Another concern, the reluctance of stakeholders to join or effectively participate is driven in large part by this lack of standardization. For example, large lien holders may be reluctant to participate if they believe they will need to have a different implementation for every state with which they need to work.

6.4

Verify Consumer Identity

During discussion of using AAMVA's Driver License Data Verification (DLDV) service to verify a consumer's identity, the Task Force decided that identity was not a core function of the VTA and an evaluation of DLDV was not a task it should undertake. Ultimately, none of the POC participants attempted to evaluate a method of electronically verifying a consumer's identity. Therefore, the Task Force did not attempt to answer the two key evaluation questions about the feasibility of verifying consumers' identities.

6.4.1 Current Methods of Verifying Consumer Identity

States responding to the survey reported how they currently verify the identity of consumers. Those states use different methods depending on whether the state is dealing with the consumer face-to-face or remotely, such as on-line or by mail. One state does not verify the identity of title applicants, but if the applicant has a driver license in that state it will use a single customer record for both the driver license and the title.

When dealing with consumers face-to-face, most states require a consumer to present a government issued identification document, usually one that includes a picture. States do vary on exactly which documents they will accept, but the list invariably includes the state's own driver licenses and identification cards. Other documents accepted include the following:

- A valid State Photo Driver's License
- A valid State Photo Identification Card
- A valid State Photo Exempt Driver's License
- A valid State Photo Exempt Identification Card
- A valid U.S. Armed Forces Common Access Card
- Dependents of Armed Forces Personnel must provide a valid United States Uniformed Services Identification and Privilege Card (DD Form 1173)

When dealing with the consumer on-line, the states use information the consumer is required to provide to perform checks against the information the state already has on file. The data elements which states said they required include the consumers name, date of birth, SSN and driver license number. Different states use different subsets of those data elements, but the general process is the same. One state reported that for applications that are mailed in the consumer is required to include a copy of the person's driver license or identification card.

In states that work with third parties, the third party is required to login using a *userid* and password.

6.4.2 Possible Improvements to Verifying Consumer Identity

States suggested the following ways to improve consumer identification:

- A more secure way to verify a consumer's identity
- Use of a customer account with a login and password or PIN (but many customers would not use our services often enough to remember the password)
- Connection to personal devices that use biometrics to verify identity (such as thumbprint on iPhones)

- Electronic wallets (e.g., ISIS)
- An effort for a universally accepted online identity verification standard
- Centralized national database for identity verification
- Ability to verify driver licenses, including those from out of state
- Requirement to verify identity in order to participate in any interoperable e-titling effort.

6.4.3 Verification of a Business Entity

States reported the following ways of verifying a business entity:

- Check ID of agent/representative of the business
- Check FEIN or SSN for business
- Assign access number/password to the business
- Have the business show a copy of its business license

One state reported that it does not verify business entities, but it will capture business entity information from the State Corporation Commission (SCC) and FEIN (IRS) documents.

6.5

Notification to Consumer

The Task Force determined that each state was in the best position to decide whether or not to electronically notify consumers. None of the states chose to evaluate a method for sending notifications as part of the POC.

6.5.1 Current Methods of Notifying Consumers

States reported a variety of methods that they use for sending notifications to a consumer. In some cases, the consumer is mailed the title if no lien exists. Otherwise, the state may send a confirmation of ownership that contains the same information but is not the actual title. In another state, the consumer receives the license plates, registration, and receipt. A third state does not usually mail the title but provides it over-the counter. In one state, if the title is electronically processed then the consumer is not notified when the title is issued. Another state envisions sending the notification to the consumer via email. At least one state will allow consumers to indicate if they want the paper title or would prefer the state hold the information electronically. Finally, one of the states that recently impeded an electronic titling capability allows customers to designate on their applications whether or not they want a paper title. Customers can also verify their title information on-line.

6.5.2 Possible Improvements for Notifying Consumers

States offered some ideas for ways to improve customer notification. Most of these revolved around sending emails to the consumer. One state suggested the development to automatically send an email to the consumer when license plates and registration stickers were mailed. Another state suggested sending an email to the consumer who would then access a secure portal to complete the process. Of course, the sending of emails to the consumer would require the state to collect and store the consumer's email address.

One state questioned the need for notifying the consumer about the issuance of the title, but that states does believe that consumer education is needed about the ability to obtain a paper copy of the title if the consumer wants it.

7 CONCLUSIONS

Intra-state implementation of Modules 2 and 3 have proven to be quite successful. States plan on keeping/expanding the work done within these modules.

However, there still exist barriers to a ubiquitous, nationwide e-titling program. Those barriers are similar to those encountered in other efforts to implement systems of similar size and scope (ex. funding, standardization, participation, etc.)

Below is a summary of the items identified in the POC as specific issues that serve as barriers to a full implementation of e-titling both at the state level and on a wider regional or nationwide basis:

- The primary barrier specific to e-titling is the need to replace the current paperwork-based odometer disclosure process with an electronic process (called e-odometer). The key to successful development of e-odometer processing is agreement upon a standard, uniform process for identifying individuals and recording their participation in certain procedures that is acceptable to the National Highway Traffic Safety Administration (NHTSA). NHTSA's acceptance is critical because they have the responsibility to carry out the requirements of the Federal Truth in Mileage Act (TIMA). This item is a Module 2 issue and affects both intra-state and inter-state processing.
- Creating a standard, inter-state process that allows a vehicle purchased from a dealer in State A to be electronically titled in State B also needs to be developed. Electronic data element standards to support this process were created as a part of the POC, but electronic transactions and user procedures were not. This is a Module 2 issue.
- States would like to electronically exchange lien information in the situation where a vehicle moves from one state to another while the lien is still in effect. AAMVA's ELT Program supports this processing, but not all states use AAMVA's ELT (i.e. some have developed proprietary ELT programs). A standard, inter-state process needs to be developed. This is a Module 3 issue.
- States would like a function in Module 2 that allows them to electronically verify both the description of the vehicle (as provided by the vehicle manufacturer) and the chain of ownership of vehicles prior to first time title (as provided by a cooperative effort of the manufacturers and dealers). The intent of the verification is to detect and deter fraud at the time of first title. Since the electronic data would need to be populated by

manufacturers and dealers, their cooperation is essential. Populating that electronic data is a Module 1 issue. Once the data exists, a new function needs to be added to Module 2.

8 RECOMMENDATIONS

Recommendations for next steps are described in detail in the E-title Roadmap document.