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.
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E-Title Roadmap
Version 1.0

1 E-TITLE ROADMAP

1.1 Document Purpose
This document is intended to outline a practical path toward a comprehensive electronic title program for state vehicle titling agencies.

The ultimate goal of the Roadmap is to define a set of services that eliminates paper processing in favor of electronic record exchange for all entities involved in vehicle titling transactions.

The contents of the Roadmap are based on information collected by Clerus Solutions from the American Association of Motor Vehicle Administrators (AAMVA), E-Titling Task Force, and additional stakeholders involved in the various stages of a vehicle lifecycle. The E-Titling Task Force is referred to as the Task Force in this and other documents related to the E-Titling POC.

1.2 Document Status

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<td>Patrice Aasmo, AAMVA</td>
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1.3 Report Revision History

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1.4 References

1. E-Titling Proof of Concept Definition
2. AAMVA E-Titling POC Project Management Plan
3. Evaluation of the AAMVA E-Title Proof of Concept

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 address specific interactions between vehicle titling agencies (VTAs) and various stakeholders. For example:

- For the interaction between VTAs and lien holders, some states implemented some form of an 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, these systems have been developed and used independently of one another.

Recognizing the need to take a pro-active role in the establishment of a national model for e-titling, the AAMVA Board of Directors directed AAMVA staff to scope, document and estimate the cost of developing and implementing a “proof of concept” addressing the processing of a new vehicle from the time it leaves a manufacturer to the issuance of the first title of ownership. In September 2011, AAMVA initiated the E-Titling Proof of Concept Project to define requirements and scope for an E-Title pilot with the intent of fostering a cohesive paperless title environment across the US. Under the E-Titling Working Group, an E-Title Task Force was created to define the proof of concept (POC). This state-led effort resulted in the completion of a Proof of Concept definition in March 2012. Over the summer of 2012, AAMVA began the process of implementing the POC.

The primary goal of the E-Titling Proof of Concept was to implement technology and procedures to electronically track a new vehicle from its manufacture until it is titled for the first time, including the perfecting of any liens on the vehicle.

1 Data exchange standards exist for ELT, but some states have developed 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 and the data exchange standards used may no longer apply.
In accomplishing this primary goal, the E-Titling Proof of Concept established the following additional goals:

- Remain a state-initiated and state-controlled program.
- To the extent possible, use or adapt existing tools or systems including those:
  - Under direct state control
  - Provided by industry
  - Controlled by the Federal Government.
- Comply with both State and Federal Regulations.
- Collaborate with industry stakeholders to gain their support.

The detailed project plan, including the timeline for the implementation of the POC, is included in the document titled “AAMVA E-Titling POC Project Management Plan”.

This document, E-Title Roadmap, defines the steps that need to be taken, after the POC is completed, to create a comprehensive E-Title Program that addresses vehicle titling as defined by the Task Force.

3 SCOPE OF THE ROADMAP

At a meeting in Kansas City in September 2012, the E-Titling Task Force was asked to define the scope of the Roadmap, by describing:

- every type of vehicle to be included in e-titling,
- every buyer/seller entity that will be included in e-titling,
- interactions between entities,
- the types of data exchanges that will take place,
- the intra-state and inter-state nature of the data exchanges, and
- The types of vehicles and/or transactions that will not be within scope, if any.

3.1 Vehicles within Scope

The following new and used vehicles were defined as being within scope for the Roadmap:

- Passenger vehicles, SUVs and property carrying vehicles of all sizes and weights.
- Motorcycles
- All-Terrain Vehicles (ATVs)
- Mopeds
- Boats
- Recreational Vehicles (RV)
- Buses (person or property carrying)
- Multi-stage (conversion vans, handicap vans)
- Low Speed Vehicles
- Autonomous (driverless) Vehicles
- Homemade Vehicles (ex. motorcycles)
Kit Cars
Golf Carts
Trailers (this class of vehicle are of lower priority than the other vehicles listed above).

The task force decided that:

- Farm vehicles and special mobile vehicles **would not** be included in the Roadmap.

Not every state titles every type of vehicle mentioned above. The E-titling Program will accommodate the entire list in order to support those states that choose to title any or all of the above.

### 3.2 Buyer/Seller Entities within Scope

The following entities were defined to be within the scope of the Roadmap:

- Franchise Dealers (sell both new & used vehicles)
- Used Vehicle Dealers
- Auto Auction Houses
- Fleet Owners
- Consumers (private party sales)
- Insurance Companies
- Leasing Companies
- Holding Companies
- Rental Companies
- Salvage Companies
- Government Agencies/Military bases
- Lien Holders
- Those that make/sell homemade vehicles

Additional entities may be added to this list from time to time, as the Task Force sees fit. It was not the intention of the Task Force to limit inclusion of buyer/seller entities within E-Titling.

### 3.3 Interactions between Entities

E-Titling is concerned with any transfer of vehicle ownership. The electronic information needed by the VTA regarding a vehicle sale (and therefore vehicle titling) is not substantially different based on which entity is buying the vehicle and which entity is selling the vehicle. Any differences that do exist, that are dependent on the buyer/seller entities but have not yet been identified, will be identified as states expand their e-titling program to additional stakeholders.
3.4 The Types of Data Exchanges within the Scope of E-Titling

The E-Titling Proof of Concept included some, but not all, of the transactions that are a part of systems such as NMVTIS and ELT. At a minimum, the comprehensive E-Titling Roadmap will include those transactions that were used in the POC plus the full complement of transactions that are part of ELT and NMVTIS.

If additional transactions, beyond those known today, are needed to support the full scope of E-Titling, they will be identified as additional stakeholders and vehicles are added to states’ E-Title program.

3.5 The Intra-state and Inter-state Nature of the Data Exchanges

The scope of the Roadmap included both sales that take place within the same state and those where the buyer and seller reside in different states.

4 RESULTS OF E-TITLING PROOF OF CONCEPT

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.

*An important fact to remember is that the scope of the POC was first time titles (i.e. it did not consider used vehicles). As a result, the conclusions reached based on the POC pertain only to first time title applications.*

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 first time 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.

5 E-TITLING ROADMAP

The path forward for a ubiquitous, inter-state e-titling program includes addressing the issues raised by the POC (as noted above) and expansion of the Program to include

- additional vehicle types,
- additional vehicle manufacturers and
- used vehicles.

The following tasks need to be completed in order to make the program successful.

5.1 Develop Model Approach for Electronic Processes that Conform with the Truth in Mileage Act (TIMA) Requirements for Odometer Disclosure

States have identified this as the major hurdle to the development of a true E-Titling environment within the US. NHTSA has oversight for compliance with TIMA and is required by Congress to promulgate rules that define how states can conform using electronic signatures. Based on that date, the rules were not available for consideration in developing the concept for the POC.

NHTSA has indicated that AAMVA should familiarize itself with recently passed legislation that pertains to the use of electronic signatures within e-commerce and develop a solution based on that model.

Determining electronic signature/odometer disclosure standards that allow states to comply with TIMA are highly important to the success of a nationwide e-title program. AAMVA plans to use leftover e-titling funds to support the e-odometer effort.
5.2 State Implementation Post-POC

5.2.1 Path Forward for AAMVA and the States

There are two categories of program expansion:

1. For some e-title features, states can make decisions regarding program expansion individually because the analysis and development to support those features were completed during the POC. For example, if a state is simply adding more dealers that sell vehicles of the same types and manufacture as the ones that were identified in the POC, the state can add those dealers at any time, because the basic functionality needed to support those dealers was developed in the POC.

2. For other e-title features (i.e. those that were not assessed in the POC), state participation is needed, in the form of a Task Force, to complete the analysis and development of the procedures and information systems needed to support those features. Categories of analysis are shown below.

5.2.1.1 Inter-state First Time Titles

As identified in the POC, states would like a standard, inter-state process that allows a vehicle purchased from a dealer in State A to be electronically titled in State B.

5.2.1.2 Inter-state Lien Information Exchange

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.

5.2.1.3 Titling of Used Vehicles

Titling of used vehicles was not covered in the POC. The Task Force will need to do the analysis to determine how used vehicle sales/titles will be handled for the following situations:

- In-state sales
- Sales that cross state borders:
  - Participating state-to-participating state
5.2.1.4 Additional Vehicle Types

Many vehicle types identified by the Task Force as being within the scope of the Roadmap were not included in the POC. An analysis needs to be conducted to ensure that:

- Electronic information regarding each of these additional vehicle types can be obtained from the appropriate manufacturer,
- NMVTIS and ELT can process records pertaining to these types of vehicles,
- The electronic vehicle record contains all information needed by VTAs to process title transactions.

5.2.1.5 Buyer/Seller Entities

Many buyer/seller entities identified by the Task Force as being within the scope of the Roadmap were not a part of the POC. Based on our experience with the POC, obtaining input from and coordinating with this long list of private sector entities will be challenging and labor intensive. Of all tasks, this is the least predictable. Each entity may have a different view of the project, the level of effort and its benefits.

5.2.1.6 Electronic Verification of MCO Information

Electronic verification of the MCO was not developed in the POC. If states want that feature, it would need to be developed and tested by AAMVA.

5.2.2 Need for a Program Management Office

Regardless of which path states take, they will likely need help from the E-Titling Program Office as they move forward. That help would be in the form of:

- Education regarding the programmatic and technical requirements and implications of the Program.
- Ensuring that, for all states, the E-Titling concept and standards are being met so that inter-state data exchange can happen as envisioned.
- Assisting vendors that support dealers and other stakeholders with understanding and implementing the nationwide data exchange standards needed to participate in E-Titling.

5.3 Governance for E-titling

An active governance process is needed to ensure that states’ needs are met as a broader implementation scope is sought.
6 CONCLUSION

A nationwide E-Titling Program is well on its way to being complete. Much work has been done by the states and AAMVA over the years to define electronic transactions and data elements that support subsets of the full scope of E-Titling.

The states interested in e-titling program progress need to prioritize the items defined in Section 5.2 and obtain the resources needed to take action on those priorities.