

VOLVO

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Customer Contract Number C030588	Customer Contract Start/Finish Dates 21-Jan-2009 to 31-Dec-2010		

Concept of Operations

C030588 CVII Task 6

Task 6 integrates the driver credentials verification application developed in Task 3 and the wireless roadside vehicle safety inspection application developed in Task 4 with the specified NYSDOT back-office systems.

Responsible	Tom Richter
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1 General Information

This document describes the concept of operations and requirements for Task 6 of the NYSDOT CVII Project.

1.1 Document Contacts

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1.2 Revision History

Issue	Date	Author	Changes
1.0	18 Apr 2011	Mike Siebert	Initial

1.3 Reference Documents

- [1] Contract #C030588 – PIN: CC95.07.121
Commercial Vehicle Infrastructure Integration
New York State – Department of Transportation
- [2] 6980-02821-01-02 C030588 CVII Program Plan
Volvo Technology – Tom Richter
Issue 2.1 – 15 Sep 2009
- [3] NYS CVII DSRC Message Set
Southwest Research Institute – Mike Brown
Issue 1.0 – 09 Oct 2009
[Based on SAE J2735 DSRC Message Set Dictionary]

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- [4] DMCU/Vehicle Gateway Interface Definition
Southwest Research Institute – Mike Brown
Issue 1.0.0 – 09 Oct 2009
- [5] 6980-02821-01-04 State-of-the-Art Review on Information and Warning Strategies
Volvo Technology – Paul Piamonte
Issue 1.0 – 09 Oct 2009
- [6] Kapsch TRC to IIS Smart Roadside Interface Specification
Kapsch TrafficCom Inc. – Steve Sprouffske
Version 0.7 – 08 Sep 2010

1.4 Abbreviations

ABS	Anti-lock Brake System
CDL	Commercial Drivers License
ConOps	Concept of Operations
CVII	Commercial Vehicle to Infrastructure Integration
DCV	Driver Credentials Verification
DOT	Department of Transportation
DMCU	5.9 GHz DSRC Mobile Communications Unit
DSRC	Dedicated Short-Range Communications
ECU	Electronic Control Unit
GBS	Government Back-office System
GPS	Global Positioning System
HVI	Human Vehicle Interface
IP	Internet Protocol
N/A	Not Applicable
NYS	New York State
NYSDOT	New York State Department of Transportation
PIN	Personal Identification Number
RSE	Roadside Equipment
SAE	Society of Automotive Engineers
TGW	Volvo Telematics GateWay
VII	Vehicle to Infrastructure Integration
VIN	Vehicle Identification Number
VTEC	Volvo Technology

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WRI Wireless Roadside Inspection

1.5 Requirement Identifier

Req TASK6-001/1.0: Requirement Identifier

The requirement identifier for this specification shall be TASK6.

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2 Task 6 Concept

2.1 Background

The overall scope of the NYSDOT CVII Project can be found in References [1] and [2].

Task 6 integrates the driver credentials verification application developed in Task 3 and the wireless roadside inspection application developed in Task 4 with the specified NYSDOT back-office systems.

2.2 Driver Credentials Verification Objectives

The objectives of Task 6 for Driver Credentials Verification are to integrate and demonstrate an end-to-end CVII application which requires a commercial vehicle driver's credentials to be validated prior to allowing a parked vehicle to be started.

The specific activities required for Task 6 are:

- Provide an HVI consistent with the commercial vehicle environment
- Collect commercial vehicle driver's credentials
- Integrate with a NYS GBS supporting the CVII DCV interface
- Support vehicle immobilization
- Complete an end-to-end acceptance test of the application

Due to the current lack of government standards or initiatives supporting machine readable driver credentials, Task 6 will utilize a simulated driver credentials based on a commercially available smart card.

2.3 Wireless Roadside Inspection Objectives

The objectives of Task 6 for Wireless Roadside Inspection are to integrate and demonstrate an end-to-end CVII application which is capable of performing a wireless roadside safety inspection of a commercial vehicle.

The specific activities required for Task 6 are:

- Provide an HVI consistent with the commercial vehicle environment
- Collect the commercial vehicle's inspection data
- Integrate with the specified NYSDOT GBS
- Support the display of GBS defined messages to the driver
- Complete an end-to-end acceptance test of the application

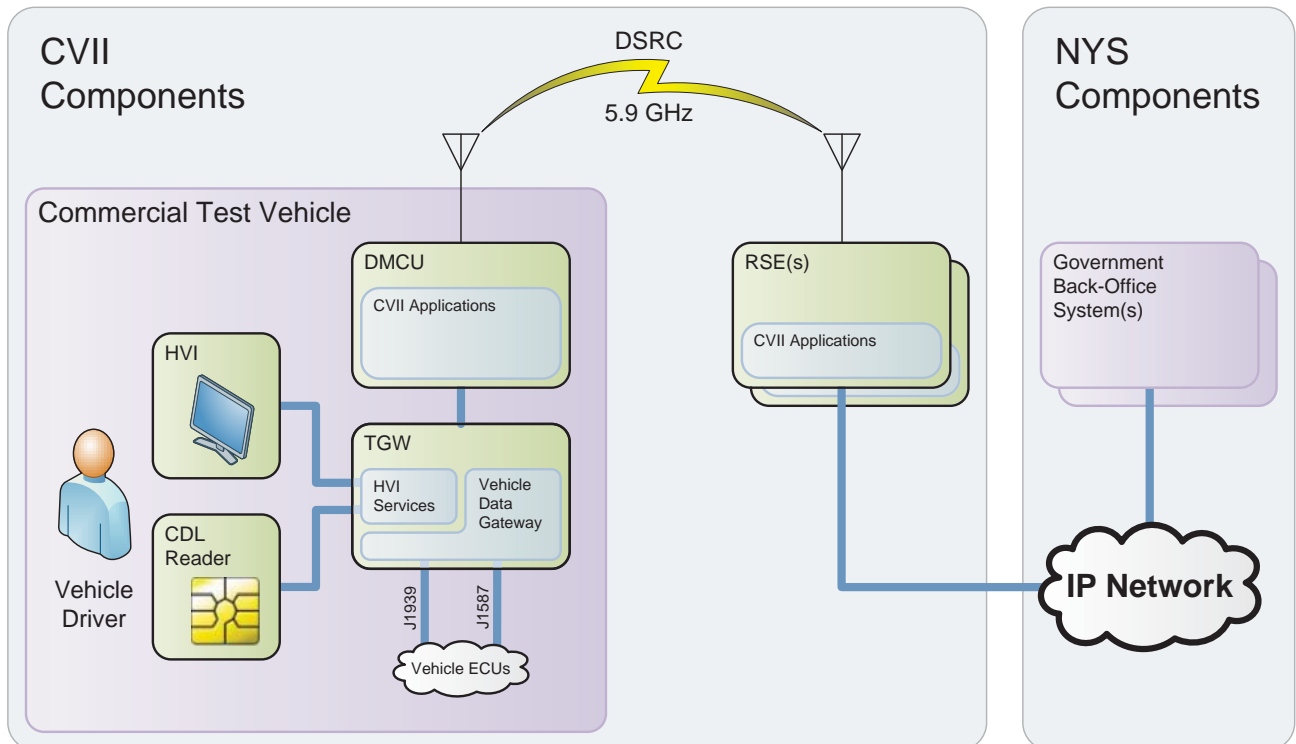
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2.4 System Overview

The following components are utilized in Task 6:

- Commercial Test Vehicle includes:
 - DMCU
 - TGW
 - HVI
 - CDL Reader
- The off-board system includes:
 - RSE(s) with access to the NYS IP Network
 - GBS supporting CVII DCV and WRI RSE interface
[The GBS is not defined, developed, or supplied by this project.]

The figure below shows the relationships between the Task 6 components.



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3 Driver Credentials Verification Operational Scenarios

The operational scenarios defined in the detailed use cases in the following paragraphs represent a simple, perfect-path case and are intended to provide a platform which can be used in the future to explore the complex scenarios and processes that must be handled to produce an effective and safe service.

The following notations are utilized in the use cases:

- [Alternate flows triggered by noted exceptions]
- {GBS functionality not specified or verified by this project}

3.1 Driver Credentials Validation Service Registration

This use case supports an infrastructure configuration process which supplies the required connection parameters for the RSE to communicate with the GBS. This is a manual administrative function which is required only when the infrastructure connecting the RSE and GBS changes.

Triggers:

- An administrator needs to add or reconfigure the Driver Credentials Validation Service on an installed RSE.

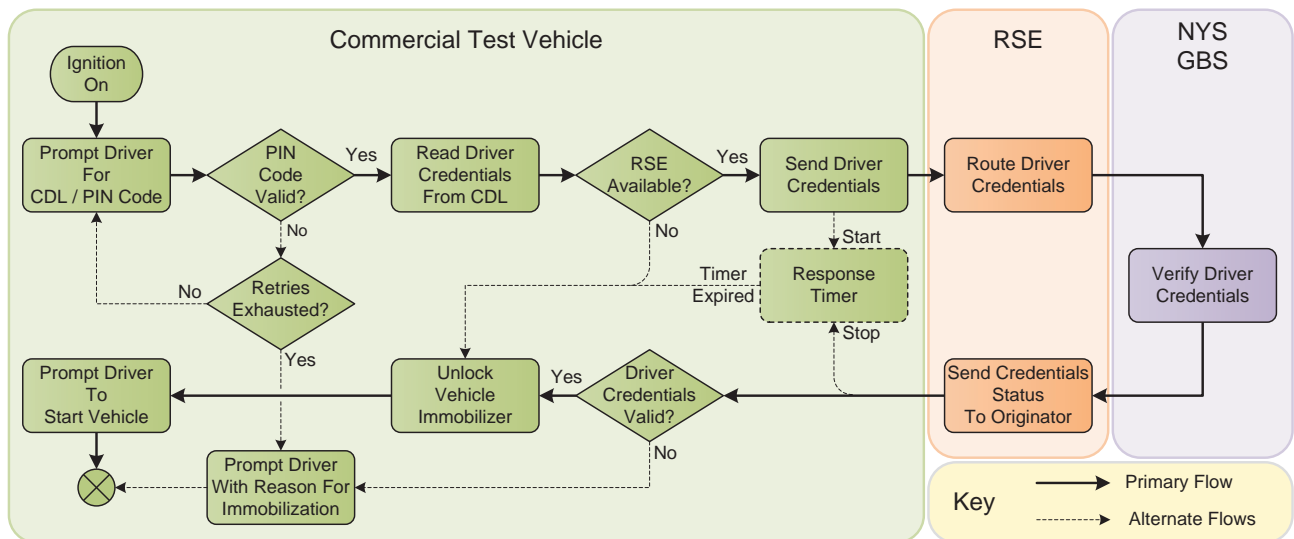
Use Case:

- An administrator logs into the affected RSE.
- The administrator configures the required routing to the GBS supporting the Driver Credentials Validation Service.
- The administrator logs out of the RSE.

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3.2 Vehicle Startup

This is the primary use case supporting the Driver Credentials Validation Service. The figure below shows an overview of the use case.



Triggers:

- The driver turns the vehicle's ignition switch on.

Use Case:

- The TGW prompts the driver for their simulated CDL card.
- The driver inserts their simulated CDL card in the CDL Reader.
- The TGW prompts the driver for their PIN code.
- The driver enters their PIN code.
- The TGW:
 - Unlocks the simulated CDL card using the PIN code. [Alternative: PIN Code Not Valid]
 - Reads the driver credentials from the simulated CDL card.
 - Sends the driver credentials to the DMCU and starts a fail-safe response timer. [Alternative: Fail-Safe Response Timer Expired]

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- Connected to an RSE supporting the Driver Credentials Validation Service, the DMCU sends the driver credentials to the RSE and starts a response timer.
[Alternative: No RSE Available]
[Alternative: Response Timer Expired]
- The RSE routes the driver credentials to the GBS via the IP Network.
- The GBS:
 - Receives the driver credentials.
 - { Verifies the driver credentials creating the driver credentials status. }
 - Routes the driver credentials status to the RSE via the IP Network.
- The RSE sends the driver credentials status message to the originating DMCU.
- The DMCU sends the driver credentials status to the TGW and stops the response timer.
- The TGW:
 - Stops the fail-safe response timer.
 - With valid or timeout driver credentials status:
[Alternative: Driver Credentials Not Valid]
 - Unlocks the vehicle immobilizer.
 - Prompts the driver to start the vehicle.
- The use case ends.

Alternative: PIN Code Not Valid:

The PIN code supplied by the driver does not unlock the CDL card.

- The TGW prompts the driver to re-enter their PIN code.
[Alternative: PIN Code Retries Exhausted]
- The Vehicle Startup Use Case resumes with the ‘Unlocks the CDL card ...’ step.

Alternative: PIN Code Retries Exhausted:

The maximum retries for the driver to enter their PIN code has been exceeded.

- The TGW prompts the driver with the reason for failure, leaving the vehicle immobilized.
- The use case ends.

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Alternative: Fail-Safe Response Timer Expired:

The TGW does not get a timely response from the DMCU.

- The TGW:
 - Unlocks the vehicle immobilizer.
 - Prompts the driver to start the vehicle.
- The use case ends.

Alternative: No RSE Available:

The DMCU does not currently have a connection to an RSE supporting the Driver Credentials Validation Service.

- The DMCU sends a no service status to the TGW.
- The TGW:
 - Unlocks the vehicle immobilizer.
 - Prompts the driver to start the vehicle.
- The use case ends.

Alternative: Response Timer Expired:

The DMCU does not get a timely response from the RSE.

- The DMCU sets the driver credentials status to Timeout.
- The Vehicle Startup Use Case resumes with the ‘The DMCU sends the driver credentials status ...’ step.

Alternative: Driver Credentials Not Valid:

The TGW receives an invalid driver credentials status.

- The TGW prompts the driver with the reason for failure, leaving the vehicle immobilized.
- The use case ends.

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4 Wireless Roadside Inspection Operational Scenarios

The modular structure of the service use cases defined in the following paragraphs can support a wide variety of operational scenarios based on the provided inspection data. This can include true inspection scenarios such as:

- Safety inspection station bypass
- Temporary safety inspection stations
- Mobile safety inspections
- Virtual safety inspections

But the service can also be used to provide fleets with valuable data for normal fleet operations which is not processed by an enforcement division. These scenarios include:

- Self-inspections by the fleet safety officer
- Vehicle maintenance
- Fleet management

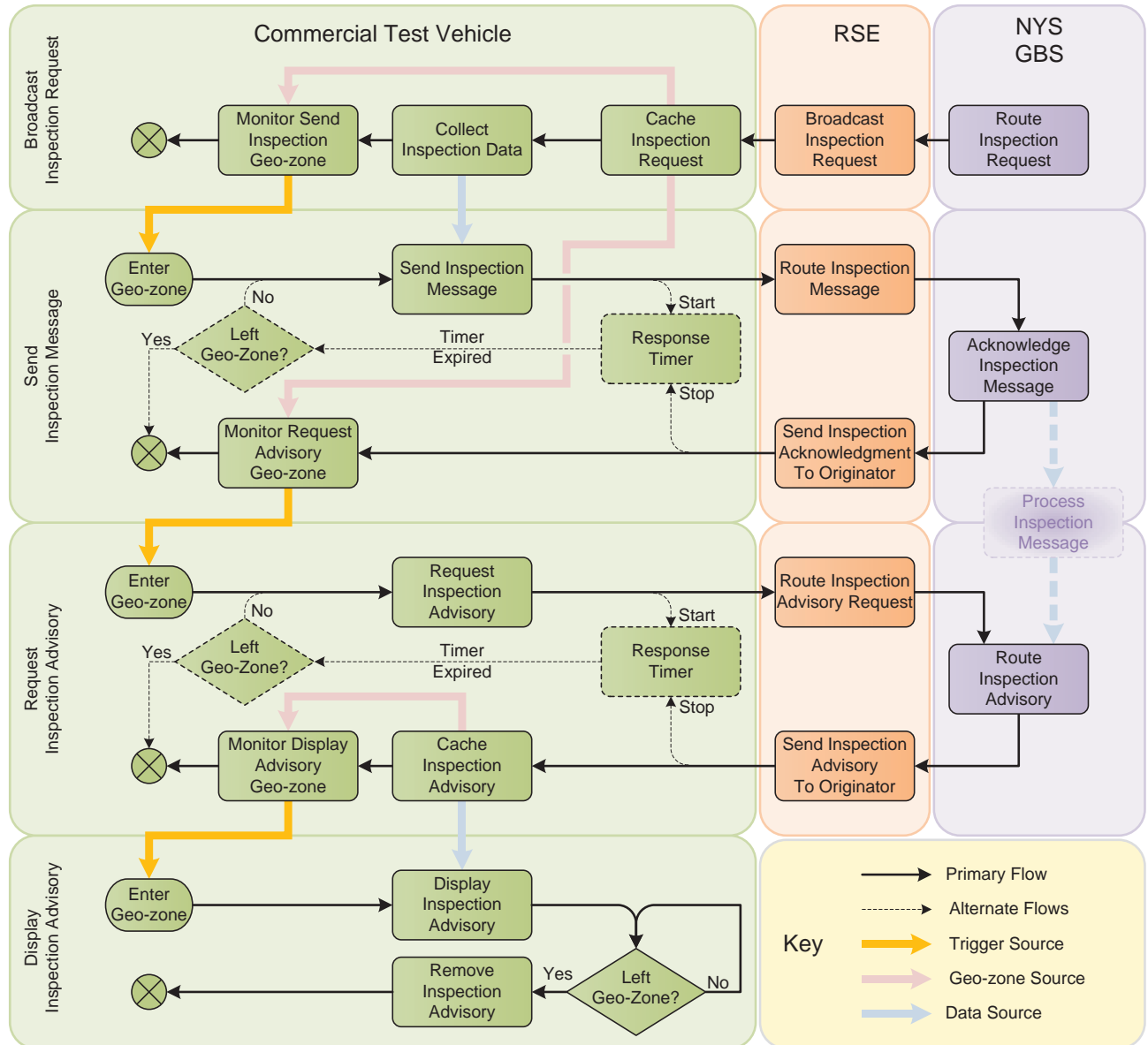
The following notations are utilized in the use cases:

- [Alternate flows triggered by noted exceptions]
- {GBS functionality not specified or verified by this project}

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4.1 Use Case Overview

The figure below shows an overview of the use cases.



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4.2 Broadcast Inspection Request Use Case

This use case allows the GBS to broadcast a request for inspection data to all appropriately equipped vehicles within range of one or more selected RSE's.

Triggers:

- GBS inspection request trigger event.

Use Case:

- The GBS routes an inspection request to selected RSE(s) containing:
 - Send inspection geo-zone.
 - Request advisory geo-zone.
- The RSE broadcasts the inspection request.
- The DMCU (in range of the broadcasting RSE):
 - Caches the received inspection request.
 - Requests inspection data from the TGW.
- The TGW:
 - Collects the inspection data.
 - Sends the inspection data to the DMCU.
- The DMCU:
 - Receives the inspection data.
 - Formats the inspection data into an inspection message.
 - Monitors the send inspection geo-zone specified in the inspection request and, when/if it is satisfied, creates a trigger event for the Send Inspection Message Use Case.
- The use case ends.

4.3 Send Inspection Message Use Case

This use case supports the vehicle's transmission of inspection data to the GBS which requested the inspection.

Triggers:

- A send inspection message trigger event.

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Use Case:

- The DMCU sends the inspection message to a connected RSE and starts a response timer.
[Alternative: Inspection Message - Response Timer Expired]
- The RSE routes the inspection message to the GBS via the IP Network.
- The GBS:
 - Receives the inspection message.
 - Routes a receipt acknowledgement to the RSE via the IP Network.
 - {Processes the inspection message.}
- The RSE sends the receipt acknowledgement to the originating DMCU.
- The DMCU:
 - Stops the response timer.
 - Monitors the request advisory geo-zone specified in the inspection request and, when/if it is satisfied, creates a trigger event for the Request Inspection Advisory Use Case.
- The use case ends.

Alternative: Inspection Message - Response Timer Expired:

The DMCU does not receive a receipt acknowledgement from the RSE within a reasonable time period.

- The DMCU restarts the Send Inspection Message Use Case.
[Alternative: Inspection Message - Vehicle Leaves Geo-Zone]

Alternative: Inspection Message - Vehicle Leaves Geo-Zone:

The vehicle leaves the send inspection message geo-zone.

- The use case ends.

4.4 Request Inspection Advisory Use Case

This use case, optional at the discretion of the GBS, supports the retrieval of an inspection advisory from the GBS which is based on the results of the inspection.

Triggers:

- A request inspection advisory trigger event.

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Use Case:

- The DMCU requests the inspection advisory from a connected RSE and starts a response timer.
[Alternative: Inspection Advisory - Response Timer Expired]
- The RSE routes the inspection advisory request to the GBS via the IP Network.
- The GBS:
 - Receives the inspection advisory request.
 - {Generates an inspection advisory based on the processed inspection message.}
 - Routes the inspection advisory to the RSE via the IP Network.
- The RSE sends the inspection advisory message to the originating DMCU.
- The DMCU:
 - Stops the response timer.
 - Caches the inspection advisory message.
 - Monitors the display inspection advisory geo-zone specified in the inspection advisory message and, when/if it is satisfied, creates a trigger event for the Display Inspection Advisory Use Case.
- The use case ends.

Alternative: Inspection Advisory - Response Timer Expired:

The GBS has not finished processing the inspection message to create the inspection advisory or the connection between the DMCU and RSE has been lost.

- The DMCU restarts the Request Inspection Advisory Use Case.
[Alternative: Inspection Advisory - Vehicle Leaves Geo-Zone]

Alternative: Inspection Advisory - Vehicle Leaves Geo-Zone:

The vehicle leaves the request inspection advisory geo-zone.

- The use case ends.

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4.5 Display Inspection Advisory Use Case

This use case, optional at the discretion of the GBS, supports the display of a retrieved inspection advisory to the driver.

Triggers:

- A display inspection advisory trigger event.

Use Case:

- The DMCU sends the inspection advisory to the TGW.
- The TGW displays the inspection advisory to the driver.
- When the vehicle leaves the geo-zone, the DMCU sends an inspection advisory deactivation message to the TGW.
- The TGW stops displaying the inspection advisory.

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5 Driver Credentials Verification Requirements

5.1 General Requirements

Req TASK6-002/1.0: Commercial Drivers License

The driver credentials shall be stored on a simulated CDL based on a Smart Card.

Req TASK6-003/1.0: Driver Credentials Access

A PIN code shall be required to access the stored driver credentials on the simulated CDL.

Req TASK6-004/1.0: Driver Credentials

The driver credentials used for validation shall, as a minimum, contain the following information:

- License Number
- Issuing State
- Issue Date
- Expiration Date
- Class (A, B, C)
- Name (Last, First, Middle)
- Address (Street, City, State, Zip Code)

Req TASK6-005/1.0: Driver Credentials Status

The driver credentials status shall as a minimum contain the following information:

- Status - One of the following:
 - License Valid
 - License Expired
 - License Revoked
 - Medical Certificate Expired

5.2 RSE Driver Credentials Validation Service

Req TASK6-006/1.1: Driver Credentials Validation Service Configuration

The RSE shall support an administrative interface which allows for the configuration of the driver Credentials Validation Service, including routing information to the GBS driver credentials validation application supporting the service.

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Req TASK6-007/1.0: Driver Credentials Validation Service Notification

When configured appropriately, the RSE shall support Driver Credentials Validation Service notification to connected DMCU's.

Req TASK6-008/1.0: Driver Credentials Validation Message Routing

When configured appropriately, the RSE shall route a driver credentials validation message as defined in Reference [3], which was received from a DMCU, to a specified GBS over the IP Network.

Req TASK6-009/1.0: Driver Credentials Status Message Routing

When configured appropriately, the RSE shall route a driver credentials status message as defined in Reference [3], which was received from a specified GBS via the IP Network, to the DMCU that originated the driver credentials validation message for which this is a response.

Req TASK6-010/1.0: RSE Transaction Log

To the greatest degree reasonable, the RSE shall maintain a transaction log with time stamps for all messages and data connections that it handles.

5.3 GBS DCV Interface

Req TASK6-011/1.0: CVII DCV RSE Interface

The NYS GBS shall support the requirements of the CVII DCV RSE interface as defined in Reference [6].

Req TASK6-012/1.0: Driver Credentials Validation Message Reception

The NYS GBS shall be capable of receiving a properly formatted driver credentials validation message from an RSE via the IP Network.

Req TASK6-013/1.0: Driver Credentials Status Message Response

When the driver credentials status is available, the NYS GBS shall be capable of sending a properly formatted driver credentials status message to the RSE via the IP Network in response for each valid received driver credentials validation message.

5.4 TGW Driver Credentials Validation Application

Req TASK6-014/1.0: Vehicle Immobilization

The TGW shall enable the vehicle immobilization function.

Note: The vehicle immobilization function prevents the vehicle from being started each time the ignition switch is turned on until the immobilization function is unlocked.

Req TASK6-015/1.0: Driver Identification Prompt

When the vehicle's ignition switch is turned on, the TGW shall notify the driver that the vehicle may not be started until their CDL has been verified and prompt the driver to place their CDL into the card reader.

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Req TASK6-016/1.0: Driver PIN Code Prompt

When the driver inserts their CDL into the card reader, the TGW shall prompt the driver to provide their CDL PIN code and collect the PIN code.

Req TASK6-017/1.0: Driver Credentials Access

Using the driver provided CDL PIN code, the TGW shall read the driver credentials from the CDL.

Req TASK6-018/1.1: Invalid PIN Code

If the PIN code provided by the driver is invalid, the TGW shall prompt the driver for a new PIN code with a programmable maximum retry count.

Req TASK6-019/1.1: Invalid PIN Code Retries Exceeded

If the maximum retry count is exceeded, the TGW shall not disable the vehicle immobilization function and shall notify the driver of the reason for immobilization.

Req TASK6-020/1.0: Driver Credentials Transmission

The TGW shall transmit the driver credentials to the DMCU as defined in Reference [4].

Req TASK6-021/1.1: Vehicle Immobilization Override

The TGW shall disable the vehicle immobilization function and shall notify the driver that the vehicle may be started:

- On receipt of a valid driver credentials status, no RSE available status, or timeout status from the DMCU as defined in Reference [4]
- On a timeout waiting for a response from the DMCU

Req TASK6-022/1.1: Invalid Driver Credentials Status

If an invalid driver credentials status is received from the DMCU as defined in Reference [4], the TGW shall not disable the vehicle immobilization function and shall notify the driver of the reason for immobilization.

5.5 DMCU Driver Credentials Validation Application

Req TASK6-023/1.0: Driver Credentials Handling

On receipt of driver credentials from the TGW as defined in Reference [4], the DMCU shall:

- In range of an RSE supporting the Driver Credentials Validation Service:
Format the driver credentials into a driver credentials validation message as defined in Reference [3]
- Not in range of an RSE supporting the Driver Credentials Validation Service:
Send a no RSE available status to the TGW as defined in Reference [4]

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Req TASK6-024/1.0: Driver Credentials Validation Retries

If there is no driver credentials status response within 5 seconds, the DMCU shall retry the transmission driver credentials validation message until a response is received or 5 attempts have been exceeded.

Req TASK6-025/1.0: Driver Credentials Status

On receipt of a driver credentials status message as defined in Reference [3], the DMCU shall send the driver credentials status to the TGW as defined in Reference [4].

Req TASK6-026/1.0: Driver Credentials Status Timeout

If the driver credentials validation retries are unsuccessful, the DMCU shall send a timeout status to the TGW as defined in Reference [4].

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6 Wireless Roadside Inspection Requirements

6.1 General

Req TASK6-027/1.0: DSRC WRI Message Security

All DSRC WRI communications shall be secured in accordance with the requirements of Reference [3].

Req TASK6-028/1.0: Inspection Request Message

The inspection request message shall be defined in Reference [3] and shall, as a minimum, contain the following information:

- Send inspection message geo-zone
- Request inspection advisory geo-zone

Req TASK6-029/1.1: Inspection Message

The inspection message shall be defined in Reference [3] and shall, as a minimum, contain the following vehicle inspection data:

- Tractor Information:
 - VIN
 - Weight per axle group
 - Tire Information (Pressure, Temperature) per tire
 - Brake Status (ABS, Stroke, Remaining Lining) per axle per side
 - Seat Belt Status
 - Lighting Status
- Trailer Information per trailer:
 - VIN
 - Position Behind Tractor
 - Weight per axle group
 - Tire Information (Pressure, Temperature) per tire
 - Brake Stroke Status per axle
 - Lighting Status
- Driver credentials:
 - License Information (Number, State, Issue Date, Expiration Date, Class)

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- Name (Last, First, Middle)
- Address (Street, City, State, Zip Code)
- Position Information (Latitude, Longitude, Heading)

Req TASK6-030/1.0: Request Inspection Advisory Message

The request inspection advisory message shall be defined in Reference [3] and shall, as a minimum, contain the following information:

- Tractor VIN

Req TASK6-031/1.0: Inspection Advisory Message

The inspection advisory message shall be defined in Reference [3] and shall, as a minimum, contain textual information and/or instructions for the driver.

Req TASK6-032/1.0: Transaction Log/Archive Correlation

To the greatest degree reasonable, the entries in the transaction logs and archives maintained by the system components supporting the WRI Application shall support correlation between the systems to allow individual WRI Application message flows and actions to be tracked system wide.

Req TASK6-033/1.0: Transaction Log/Archive Time Stamps

To the greatest degree reasonable, the time stamps used in the transaction logs and archives maintained by the system components supporting the WRI Application shall use a common time standard (e.g. GPS) to allow individual WRI Application message flows and actions to be accurately timed system wide.

6.2 RSE WRI Service

Req TASK6-034/1.0: Inspection Request Broadcast Service

The RSE shall be capable of broadcasting an inspection request message as defined in Reference [3] which was received from a specified GBS via the IP Network.

Req TASK6-035/1.0: Inspection Message Routing

The RSE shall be capable of routing an inspection message as defined in Paragraph 6.1, which was received from a DMCU, over the IP Network to a specified GBS.

Req TASK6-036/1.0: Inspection Message Receipt Routing

The RSE shall be capable of routing an inspection message receipt as defined in Reference [3], which was received from a specified GBS via the IP Network, to the DMCU which originated the inspection message.

Req TASK6-037/1.0: Request Inspection Advisory Reception

The RSE shall be capable of routing a request inspection advisory message as defined in Reference [3], which was received from a DMCU, to a specified GBS over the IP Network.

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Req TASK6-038/1.0: RSE Message Routing

The RSE shall be capable of routing an inspection advisory message as defined in Reference [3], which was received from a specified GBS via the IP Network, to the DMCU that originated the request inspection advisory message for which this is a response.

Req TASK6-039/1.0: RSE Transaction Log

To the greatest degree reasonable, the RSE shall maintain a transaction log with time stamps for all messages and data connections that it handles.

Req TASK6-040/1.0: RSE Installation Options

The RSE running the WRI Service shall be capable of operating in either a fixed, roadside installation or a mobile, vehicle-based installation.

6.3 GBS WRI Interface

Req TASK6-041/1.0: CVII WRI RSE Interface

The NYS GBS shall support the requirements of the CVII WRI RSE interface as defined in Reference [6].

Req TASK6-042/1.0: Inspection Request Transmission

The NYS GBS shall be capable of sending a properly formatted inspection request to an RSE via the IP Network at a programmable interval.

Req TASK6-043/1.0: Inspection Message Reception

The NYS GBS shall be capable of receiving a properly formatted inspection message from an RSE via the IP Network.

Req TASK6-044/1.0: Inspection Message Acknowledgement Response

The NYS GBS shall be capable of sending a properly formatted inspection message acknowledgement to an RSE via the IP Network in response for each valid received inspection message.

Req TASK6-045/1.0: Request Inspection Advisory Message Reception

The NYS GBS shall be capable of receiving a properly formatted request inspection advisory message for a specified vehicle from an RSE via the IP Network.

Req TASK6-046/1.0: Inspection Advisory Message Response

When the inspection advisory for the specified vehicle is available, the NYS GBS shall be capable of sending the advisory in a properly formatted message to the RSE via the IP Network in response for each valid received request inspection advisory message.

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6.4 DMCU WRI Application

Req TASK6-047/1.0: Inspection Request Message Reception

The DMCU shall be capable of receiving and caching inspection request messages, defined in Paragraph 6.1, that are broadcast by an RSE.

Req TASK6-048/1.0: Outdated Inspection Request Detection

The DMCU shall be capable of determining when an inspection request is outdated and shall delete all outdated inspection requests.

Req TASK6-049/1.0: Inspection Request Retention

The DMCU shall discard all cached inspection requests when powered down.

Req TASK6-050/1.0: Send Inspection Message Geo-Zone

After receipt of an inspection request, the DMCU shall:

- Request vehicle inspection data from the TGW as defined in Paragraph 6.1.
- Monitor the send inspection message geo-zone.

Req TASK6-051/1.0: Inspection Message Transmission

When the send inspection message geo-zone is satisfied and the TGW has returned the vehicle inspection data, the DMCU shall:

- Transmit an inspection message as defined in Paragraph 6.1
- Receive a message receipt acknowledgement

Req TASK6-052/1.0: Inspection Message Transmission Failure

If the transmission of the inspection message is unsuccessful, the DMCU shall pause for 1 second and retry the transmission until the transmission is successful or the send inspection message geo-zone is no longer satisfied.

Req TASK6-053/1.0: Request Inspection Advisory Geo-Zone

When the inspection message transmission has been completed successfully, the DMCU shall monitor the request inspection advisory geo-zone.

Req TASK6-054/1.0: Request Inspection Advisory

When the request inspection advisory geo-zone is satisfied, the DMCU shall:

- Transmit a request inspection advisory message as defined in Reference [3]
- Receive the inspection advisory as defined in Reference [3]

Req TASK6-055/1.0: Request Inspection Advisory Failure

If the request inspection advisory is unsuccessful, the DMCU shall pause for a configurable period and retry the request until the request is satisfied or the request inspection advisory geo-zone is no longer satisfied.

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Req TASK6-056/1.0: Request Inspection Advisory Geo-Zone

When an inspection advisory has been received, the DMCU shall monitor the display inspection advisory geo-zone.

Req TASK6-057/1.0: Display Inspection Advisory Request

When the display inspection advisory geo-zone is satisfied, the DMCU shall send the inspection advisory to the TGW as defined in Reference [4].

Req TASK6-058/1.0: Stop Inspection Advisory Display Request

When the display inspection advisory geo-zone is no longer satisfied, the DMCU shall send a stop inspection advisory display request to the TGW as defined in Reference [4].

Req TASK6-059/1.0: DMCU Transaction Log

To the greatest degree reasonable, the DMCU shall maintain a transaction log with time stamps for all transactions that it handles.

6.5 TGW WRI Application

Req TASK6-060/1.0: Collect Vehicle Inspection Data

When a request for vehicle inspection data as defined in Reference [4] is received from the DMCU, the TGW shall collect the required data and send it to the DMCU as defined in Reference [4].

Req TASK6-061/1.0: Driver Credentials

The driver credentials included in the vehicle inspection data shall be a by-product of the CVII Driver Credentials Validation Service as defined in Paragraph 5.

Req TASK6-062/1.0: Inspection Advisory Display

When an inspection advisory is received from the DMCU, the TGW shall display the inspection advisory to the driver as the highest priority traveler advisory.

Req TASK6-063/1.0: Stop Inspection Advisory Display

When a stop inspection advisory display is received from the DMCU, the TGW shall discard the inspection advisory.

Req TASK6-064/1.0: TGW Transaction Log

To the greatest degree reasonable, the TGW shall maintain a transaction log with time stamps for all transactions that it handles.



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