
Florida CVISN Top-Level Design



Florida CVISN Top-Level Design Outline



- **Section 1:** Introduction
 - **Section 2:** Initial Projects and Top-Level Requirements
 - **Section 3:** Operational Scenarios and Top-Level System Designs
 - **Section 4:** Program Phase Charts
 - **Appendix A:** COACH, Part 1
 - **Appendix B:** COACH, Part 3
 - **Appendix C:** COACH, Part 4
 - **Appendix D:** References
-

Florida CVISN Top-Level Design



Section 1.0: Introduction

Florida CVISN

Goals and Objectives



- **Improve the state's CVO regulatory environment**
 - Reduce paperwork and time spent on compliance activities that can be cost-effectively automated
 - Network information systems to ensure timely interagency communication and critical data sharing
 - Streamline or eliminate outdated or inefficient business and enforcement processes
 - Provide the public with a single point of access to web-based credentials and motor carrier regulatory information through the State of Florida's main website MyFlorida.com – Each agency maintains their own website

Florida CVISN

Goals and Objectives (continued)



- **Ensure CVO-related safety without undue costs to motor carrier industry**
 - Improve accuracy and timeliness of safety information
 - Provide direct near-real time access to safety information at the roadside
 - Network information systems to ensure timely interagency communication and critical data sharing

Florida CVISN

Goals and Objectives (continued)



- **Optimize safe, efficient movement of people and goods throughout the state**
 - Reduce delays for weight, safety, and other CVO inspections
 - Reduce highway congestion
 - Improve highway safety

Florida CVISN

Goals and Objectives (continued)



- **Guide development and installation of adopted CVISN projects and programs in an efficient and cost-effective manner**
 - Establish a cooperative, interagency, public-private organizational structure
 - Promote interoperability of screening systems and other technical components and systems
 - Participate in CVISN Deployment Workshops and develop products based on workshop participation and review by experts and peers

Florida Electronic Credentials Administration Goals & Objectives



- **Streamline application process and reduce paperwork**
 - Allow electronic verification of applicable documentation (e.g., insurance)
 - Amend statutes as necessary to allow replacement of paper documents with electronic documents
- **Consolidate multiple credential applications into a single document (available in paper and electronic form)**
 - Identify opportunities to reduce information required
 - Create HelpDesk as single point of contact for carriers to receive information

Florida Electronic Credentials Administration Goals & Objectives (continued)



- **Participate in IRP, IFTA Clearinghouses**
 - Reduce paperwork required for interstate data exchange
- **Allow electronic payment as an optional method for tax and fee collection**
- **Make credentials information available to the roadside on a timely basis for enforcement purposes**

Florida Safety Information Exchange Goals & Objectives



- **Short-term**

- Provide wireless roadside connection to SAFER and SAFETYNET
- Retrieve information from other participating states
- Identify unsafe drivers and carriers

- **Long-term**

- Collect and submit crash data to FMCSA and roadside personnel on a more timely basis
- Provide roadside access to credentials data on intrastate carriers
- Collection of outstanding penalties due to state

Florida Electronic Screening Goals & Objectives



- **Short-term**

- Use electronic screening at all Interstate scale facilities
- Increase number of participating carriers
- Reduce delays at existing sites to benefit state and industry
- Target enforcement efforts with existing personnel
- Standardize screening and enrollment criteria nationwide

- **Long-term**

- Deploy mobile screening
- Use electronic screening at DACS sites for agriculture and revenue

Florida CVISN Background



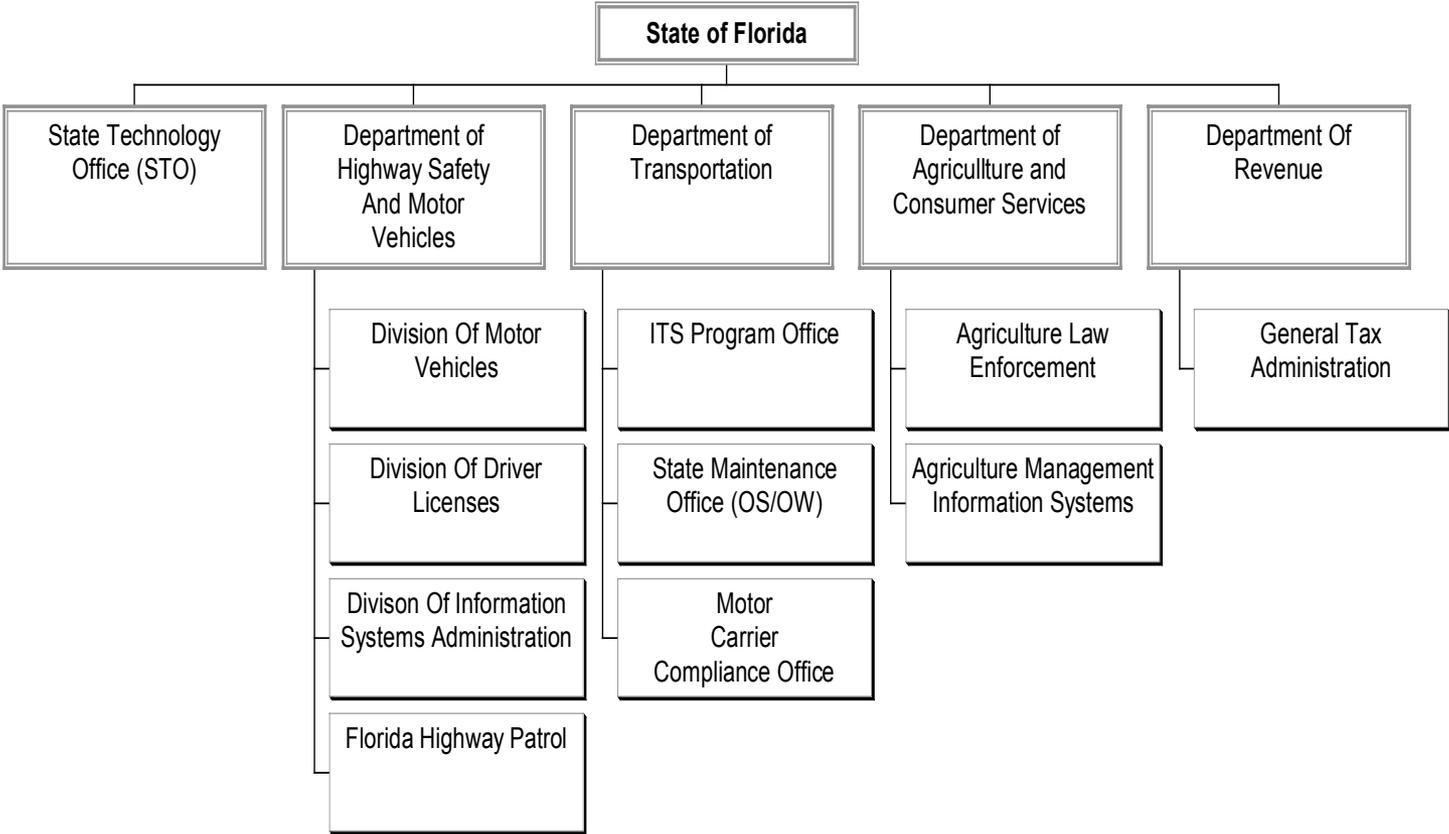
- **Florida's first foray into ITS was 1996 with the implementation of the ADVANTAGE I-75 bypass system.**
- **Mainstreaming showed us the advantages to implementing all ITS type systems.**
- **Issues such as an agriculture station one to two miles from a weigh station caused us to look at all systems and not just those typically viewed as CVISN Agencies.**
- **CVISN Wide Issues:**
 - Funding;
 - Resources; and
 - Electronic Payment.

Florida CVISN Top-Level Design

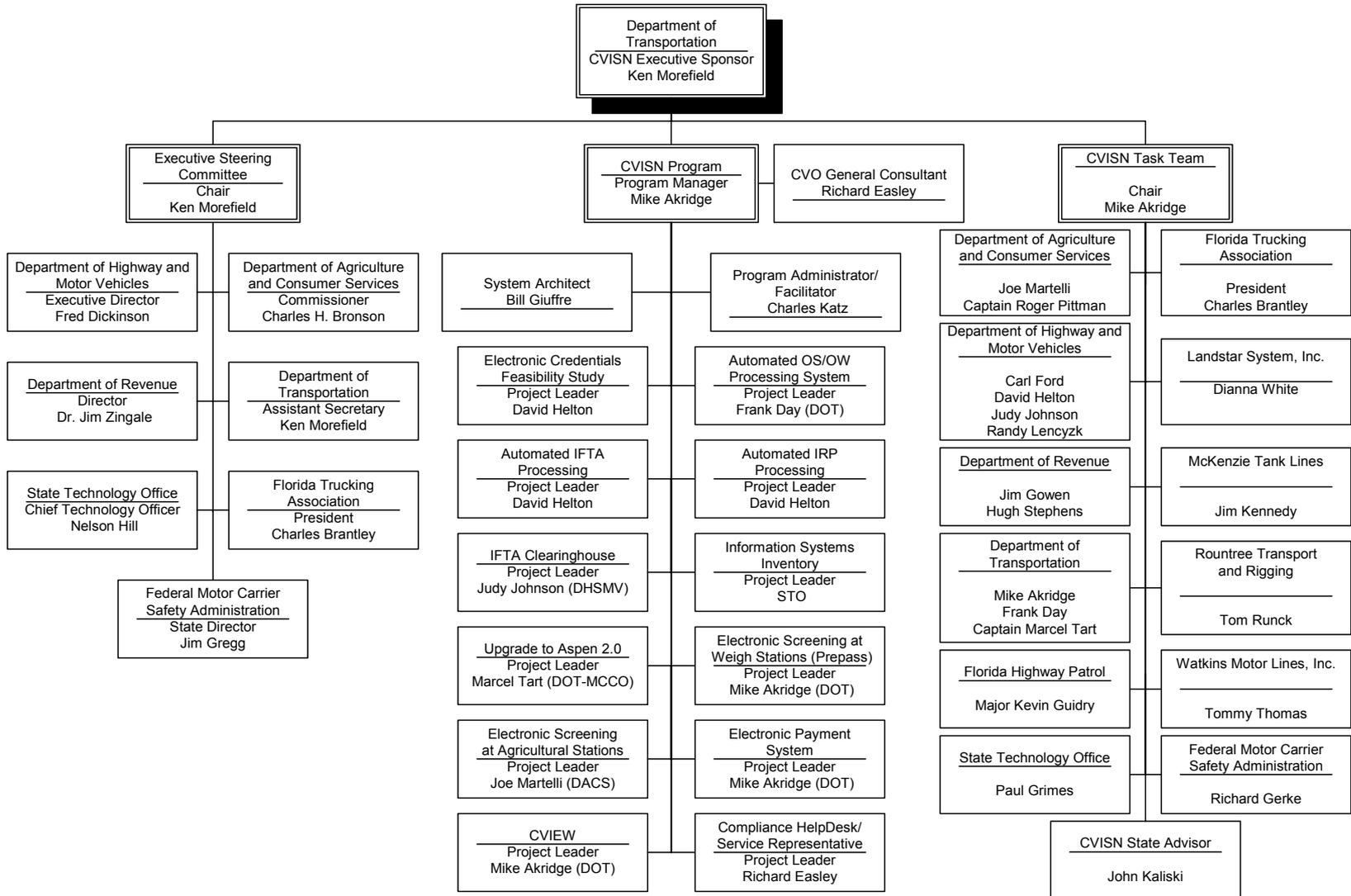


Program Organization and CVISN Task Team

Florida State Government Agencies Supporting CVISN



Florida CVISN Program Organization



Florida CVISN Task Team



- **Department of Agriculture and Consumer Services (DACS)**
 - Joe Martelli
 - Captain Roger Pittman
- **Department of Highway Safety and Motor Vehicles (DHSMV)**
 - Carl Ford
 - David Helton
 - Judy Johnson
 - Randy Lencyzk
- **Department of Revenue (DOR)**
 - Jim Gowen
 - Hugh Stephens
- **Department of Transportation (DOT)**
 - Mike Akridge (chair)
 - Frank Day
 - Captain Marcel Tart

Florida CVISN Task Team (continued)



- **State Technology Office (STO)**
 - Paul Grimes
- **Florida Highway Patrol**
 - Major Kevin Guidry
- **Federal Motor Carrier Safety Administration (FMCSA)**
 - Richard Gerke
- **Florida Trucking Association (FTA)**
 - Charles Brantley
- **Landstar System, Inc.**
 - Diana White
- **McKenzie Tank Lines**
 - Jim Kennedy
- **Rountree Transport and Rigging**
 - Tom Runck
- **Watkins Motor Lines**
 - Tommy Thomas

Florida CVISN Top-Level Design



Section 2.0: Top-Level Requirements

Section Outline

- **Initial Projects**
- **Operational Concept and Top-Level Design Checklists (COACH, Part 1)**
- **System Design and Data Maintenance Requirements (COACH, Part 3)**
- **System Interface and Data Definition Requirements (COACH, Part 4)**

Florida CVISN Top-Level Design



Initial Projects

Florida CVISN Initial Program Projects



•**10 projects were initially recommended as part of the Florida CVISN Business Plan.**

•These projects included:

- Compliance HelpDesk/Service Representative
- Electronic Credentials Feasibility Study
- Electronic Payment Options
- Automated Routing and Permitting Software Design and Development
- Electronic Credentialing Software Design and Development
- IFTA Clearinghouse
- Electronic Screening at Weigh Stations
- Electronic Screening at Agricultural Inspection Stations
- Information Systems Inventory

Florida CVISN Program Projects – Carrier Services



Project Name	Description
Compliance HelpDesk/Service Representative	<p>Provide a single point of contact in state government for CVO regulatory policy and procedure information. This role could possibly be shared among agencies.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none">1. Streamline or eliminate outdated or inefficient business and enforcement processes.2. Provide one interaction or point of contact in the state for regulatory information.

Florida CVISN Program Projects – Credentialing (1 of 3)



Project Name	Description
Electronic Credentials Feasibility Study	<p>Conduct a high-level assessment of requirements for supporting the on-line application for and receipt of CVO credentials in Florida.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none">1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated.2. Streamline or eliminate outdated or inefficient business and enforcement processes.
Electronic Payment Options	<p>Explore electronic payment options for electronic credentials in Florida.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none">1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated.2. Streamline or eliminate outdated or inefficient business and enforcement processes.

Florida CVISN Program Projects – Credentialing (2 of 3)



Project Name	Description
<p>Automated Routing and Permitting Software Design and Development</p>	<p>Develop software to support the automated processing and issuance of oversize and overweight permits in Florida.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none"> 1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated. 2. Streamline or eliminate outdated or inefficient business and enforcement processes. 3. Improve highway safety.
<p>Electronic Credentialing Software Design and Development</p>	<p>Develop software to support paperless business transactions between the Department of Highway Safety and Motor Vehicles and motor carriers in Florida.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none"> 1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated. 2. Streamline or eliminate outdated or inefficient business and enforcement processes.

Florida CVISN Program Projects – Credentialing (3 of 3)



Project Name	Description
IFTA Clearinghouse	<p>Project will develop the software for connecting to the IFTA Clearinghouse.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none">1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated.2. Streamline or eliminate outdated or inefficient business and enforcement processes.3. Promote interoperability of screening systems and other technical components and systems.

Florida CVISN Program Projects – Electronic Screening



Project Name	Description
<p>Electronic Screening at Weigh Stations</p>	<p>Deploy PrePass electronic screening to allow safe and compliant carriers to bypass weigh stations</p> <p>Objective To Be Met</p> <ol style="list-style-type: none"> 1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated. 2. Promote interoperability of screening systems and other technical components and systems. 3. Improve highway safety.
<p>Electronic Screening at Agricultural Inspection Stations</p>	<p>Deploy electronic screening at agricultural inspection stations in Florida based on clearances for the Agricultural Vehicle Inspection Program and the collection of use tax on out-of-state merchandise purchases.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none"> 1. Reduce the paperwork and time spent on compliance activities that can be cost-effectively automated. 2. Promote interoperability of screening systems and other technical components and systems. 3. Improve highway safety.

Florida CVISN Program Projects – Safety Information Exchange



Project Name	Description
<p>Information Systems Inventory</p> <p>(This information is an input to the CVIEW design and development process)</p>	<p>Conduct a detailed inventory of Florida’s CVO-related hardware and software.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none"> 1. Network information systems to ensure timely interagency communication and critical data sharing. 2. Streamline or eliminate outdated or inefficient business and enforcement processes. 3. Network information systems to ensure timely interagency communication and critical data sharing. 4. Promote interoperability of screening systems and other technical components and systems.
<p>Networked Information Systems Design and Development</p> <p>(This information is an input to the CVIEW design and development process)</p>	<p>Develop a system for the electronic interchange of information among state agencies and between deskside and roadside systems.</p> <p>Objective To Be Met</p> <ol style="list-style-type: none"> 1. Network information systems to ensure timely interagency communication and critical data sharing. 2. Streamline or eliminate outdated or inefficient business and enforcement processes. 3. Network information systems to ensure timely interagency communication and critical data sharing.

Florida CVISN Program Projects



The initial projects have evolved into a final roster of 12 projects. These final 12 projects are detailed in this Top-Level Design and Program Plan.

Electronic Credentials Administration

- Electronic Credentials Feasibility Study
- Automation of OS/OW Process
- Automation of IFTA processes
- Automation of IRP processes
- Participation in IFTA Clearinghouse

Safety Information Exchange

- Upgrade Aspen Inspection Software
- Information Systems Inventory

Electronic Screening Systems

- Mainline Electronic Screening
- Agriculture/Bill of Lading Electronic Screening

Program-wide

- Commercial Vehicle Information Exchange Window (CVIEW)
- Electronic Payment System
- Commercial Vehicle Operations HelpDesk

Florida CVISN Top-Level Design



Florida Exceptions to CVISN COACH, Part 1

Florida Exceptions to COACH, Part 1



- **Florida commits fully to the ITS/CVO Guiding Principles with the following exceptions:**
 - CVISN Architecture Principle #4—A jurisdiction shall have and maintain **ownership of any** data collected by any agent on its behalf.
 - Florida will maintain ownership of all data except for the screening data collected by PrePass
 - Roadside Operations Principle #2—Jurisdictions will support CVO roadside operations programs with **timely, current, accurate and verifiable electronic information**, making it unnecessary for properly equipped vehicles to carry paper credentials.
 - DHSMV is reviewing the statutory requirement for paper credentials (e.g. IRP cab cards) to be carried on vehicles (320.0605, F.S.)

Florida Exceptions to COACH, Part 1



- **Florida commits fully to the ITS/CVO Interoperability Guiding Principles with the following exceptions:**
 - General Principle #7—Information systems supporting electronic screening, credentials administration, and safety assurance will use:
 - US DOT numbers for the identification of both interstate and intrastate motor carriers.
 - Florida currently is reviewing whether modifications are required to DHSMV database to capture intrastate data.

Florida Exceptions to COACH, Part 1



- Hardware Principle #8—Commercial vehicle operators will be able to use one transponder for power unit to roadside communications in support of multiple applications including electronic screening, safety assurance, fleet and asset management, tolls, parking, and other transactions processes.
 - Interoperability with toll facilities currently is not possible but is a long-term goal.
- Program Principle #28—A jurisdiction will make a motor carrier's DSRC transponder unique identifier available to another jurisdiction upon written request and authorization by the motor carrier.
 - PrePass does not share its customers' DSRC transponder unique identifiers.

Florida Exceptions to COACH, Part 1



- **Florida commits fully to the State Institutional Framework with the following exceptions:**
 - #1-The State has contacted or has plans to contact State and local transportation officials to explore potential joint use of transponders to ensure integration among multiple applications (i.e. CVO, toll, traffic probes, parking management, etc.)
 - Interoperability with PrePass transponders will be addressed later.
 - #6 - Appropriate and sufficient staff, equipment, and State and private funding are available to carry out the deployment of CVISN and ITS/CVO services. The CVISN project has sufficient priority.
 - CVISN projects are competing for priority among DHSMV projects.

Florida Exceptions to COACH, Part 1



- #21 - The legislature provides adequate resources to support an active ITS/CVO program and deployment of the ITS/CVO services.
 - Funding is dependent on work programs and legislative intent and therefore funding cannot be guaranteed.
- #26 - Effective procurement plans and processes are in place to acquire services and equipment needed to support the CVISN project, and the CVISN team is aware of constraints the processes impose.
 - All agencies have procurement mechanisms. However, because procurement depends on funding availability, plans are unstable.

Florida Exceptions to COACH, Part 1



- **Florida commits fully to the General Operational Concepts for Level 1 with the following exception:**
 - Item #13—The Fair Information Principle for ITS/CVO will be implemented using a combination of policies, procedures, technology, and training. Stakeholders will be included in the discussions of the techniques to be used to implement the principles.
 - DOR has restrictions on the disclosure of information.

Florida Exceptions to COACH, Part 1



- **Florida commits fully to the General State System Design Requirements for Level 1 without exception.**
- **Florida commits fully to the CV Administration Operational Concepts for Level 1 without exception.**
- **Florida commits fully to the CV Administration Systems Design Requirements Checklist for Level 1 without exception.**

Florida Exceptions to COACH, Part 1



- **Florida commits fully to the Electronic Screening Operational Concepts with the following note:**
 - Item #3—Electronic screening is provided for vehicles equipped with FHWA-specified DSRC transponders.
 - Florida notes that this can only take place if the transponder has a recall button to meet PrePass standards.

Florida CVISN Top-Level Design



Detailed Systems Checklists COACH, Part 3

Top-Level Requirements

Exceptions to COACH, Part 3



- **Florida commits fully to the Data Maintenance and Update Level 1 Requirements without exception.**
- **Florida commits fully to the State Safety Information and Safety Assurance System Components without exception.**
- **Florida commits fully to the State CV Credential Administration Systems Components with the following notes:**
 - Florida does not participate in SSRS; and
 - Florida does not issue hazardous materials permits.

Top-Level Requirements Exceptions to COACH, Part 3



- **Florida commits fully to the State Electronic Screening Systems Components with the following note:**
 - PrePass does not share transponder information outside of its system.

Florida CVISN Top-Level Design



Florida System Interface Standards, COACH, Part 4

Top-Level Requirements

COACH, Part 4



- **Florida commits fully to the following standard interfaces:** *(Note--These are the supported interfaces, not exceptions)*
 - EDI-D
 - State IFTA Registration to/from IFTA Clearinghouse
 - EDI-E
 - Connectivity between SAFER and CVIEW
 - EDI-J
 - IFTA or IRP Clearinghouse to SAFER
 - EDI-K
 - IFTA Clearinghouse to State IFTA Tax Processing System
 - EDI-L
 - CI to Credential Web Site
 - EDI-O
 - Citation & Accident to SafetyNet 2000 (via SDM)

Top-Level Requirements

COACH, Part 4



- EDI-P
 - Receiver of 285 to sender of 285
 - Applicable only where EDI is used.
- EDI-Q
 - State IFTA Tax Processing System to CI
- EDI-V
 - All EDI-receiving systems to all EDI-sending systems
- EDI-X
 - Florida will use existing connectivity between law enforcement users and SAFER.
- DSRC
 - Transponders for communication between electronic screening operations and vehicle
 - PrePass is responsible for all DSRC interfaces
- DSRC-A
 - Transponder to Screening/Driver Comm.

Top-Level Requirements

COACH, Part 4



- DSRC-B, E, F, G, H
 - Transponder or Screening/Driver Comm. To Screening/Driver Comm. or Transponder
- AFF-A
 - SAFER to ASPEN and ASPEN to SAFER
- AFF-B
 - ASPEN to SAFER and SAFER to ASPEN
- AFF-C
 - SAFER to/from SAFETYNET 2000
- AFF-D
 - SAFETYNET 2000 to MCMIS and MCMIS to SAFETYNET 2000 (via SDM)
- AFF-E
 - ASPEN to SAFETYNET 2000 (via SDM)

Top-Level Requirements

COACH, Part 4



- AFF-G
 - ASPEN to SAFER
- AFF-H
 - ASPEN to SAFETYNET 2000 (via SDM)
- INT-A
 - Internet tools to Web Site and Web Site to Internet Tools
- INT-B
 - Internet Tools to Web Site
- INT-C
 - Web Site to Internet Tools
- INT-F
 - IFTA Clearinghouse to State IFTA Tax Processing System
- INT-G
 - Internet Tools to E-Screening Enrollment

Top-Level Requirements

COACH, Part 4



- CIA-A
 - State IRP to IRP Clearinghouse
- CIA-B
 - IRP Clearinghouse to State IRP
- CIA-C
 - SAFER to ASPEN and ASPEN to SAFER
- CIA-D
 - ASPEN to SAFER and SAFER to ASPEN
- CIA-E
 - ASPEN to SAFETYNET 2000 (via SDM)
- CIA-F
 - ASPEN to SAFETYNET 2000
- CIA-G
 - SAFETYNET 2000 to MCMIS and MCMIS to SAFETYNET 2000 (via SDM)

Top-Level Requirements

COACH, Part 4



- CIA-J
 - CDLIS to SAFER
- CIA-K
 - SAFER to CDLIS
- CIA-O
 - Sensor Comm to/from Screening
- CIA-P
 - Roadside Operations to/from Screening
- CIA-Q
 - Roadside Operations to/from Sensor/Driver Comm

Top-Level Requirements

COACH, Part 4



- **Florida commits fully to the following standard data definitions and Identifier Segments:**
 - Motor Carrier
 - Vehicle
 - Transponder
 - Trip
 - Updated OS/OW system, however, may require a different methodology for identifying trips/shipments.

Florida CVISN Top-Level Design



Section 3.0: Operational Scenarios and Top-Level Systems Design

Section Outline

- **State Design Template**
- **State Network Template**
- **Summary of New Systems**
- **Summary of Modifications to Existing Systems**

Section Outline (continued)

- **Electronic Credentials Administration Operational Scenarios and Top-Level Designs**
 - **IFTA**
 - Quarterly Tax Return
 - Renewal
 - Decal
 - **IRP**
 - Supplemental
 - Renewal
 - **Oversize/Overweight Permitting**

Section Outline (continued)

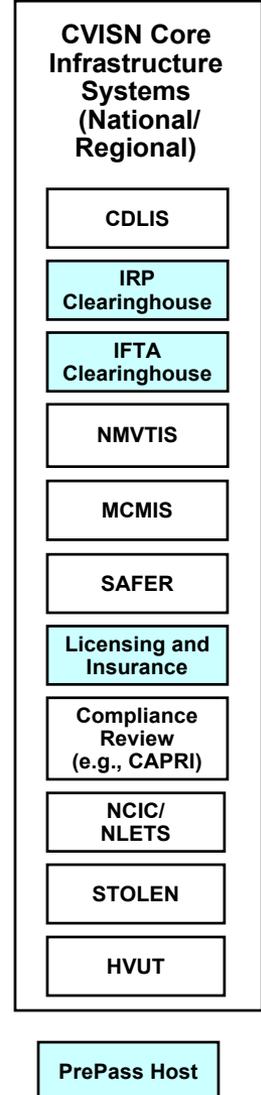
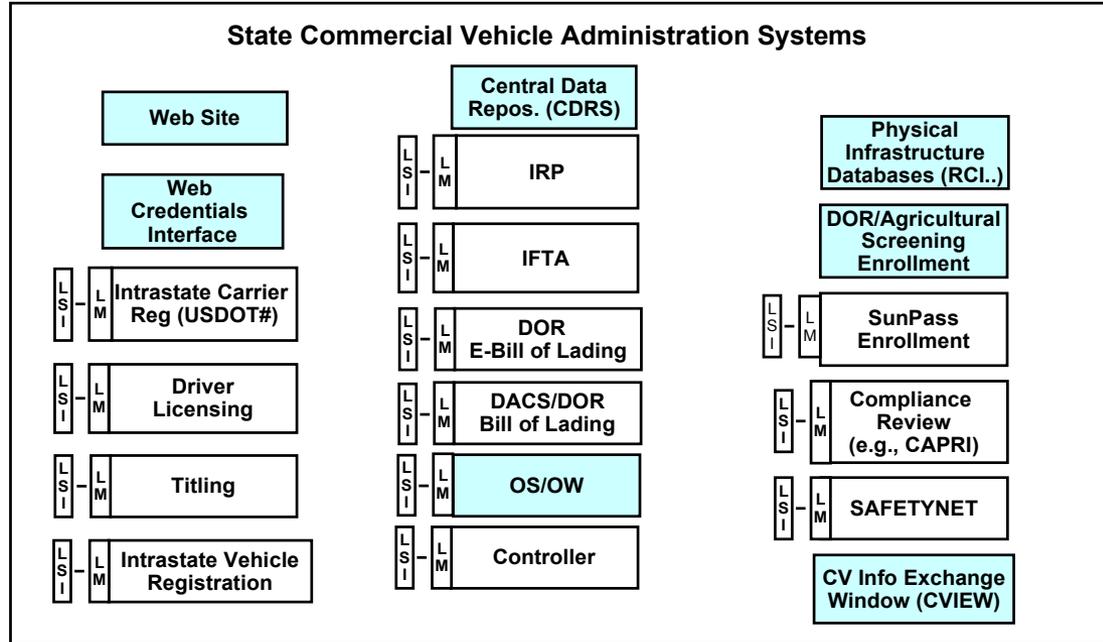
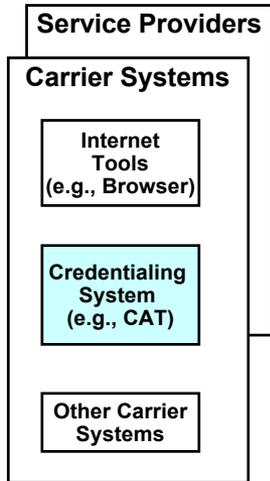
- **Safety Information Exchange Operational Scenarios and Top-Level Designs**
 - Roadside Inspections
 - Previous Inspection Query
- **Electronic Screening Operational Scenarios and Top-Level Design**
 - Data Verification to Support Enrollment in Mainline Electronic Screening Program
 - Mainline Electronic Screening
 - Enrollment in the Agricultural/Bills of Lading Electronic Screening Program
 - Agricultural/Bills of Lading Electronic Screening Program

Section Outline (continued)

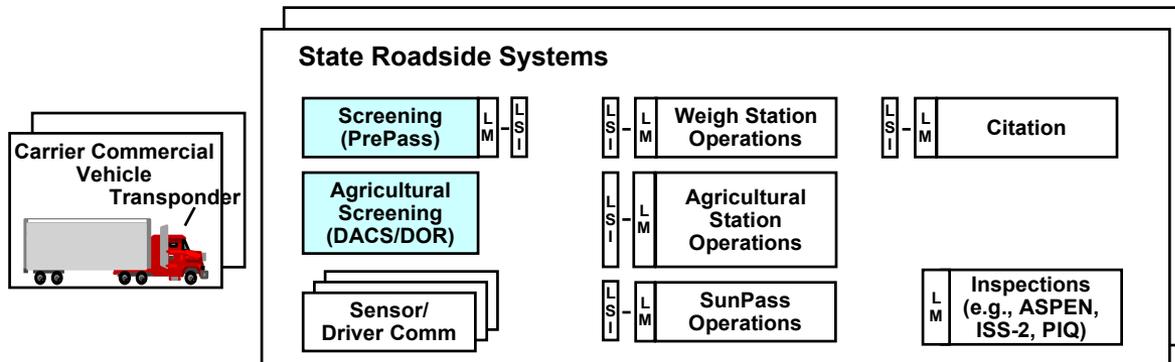


- **Program-wide Operational Scenario and Top-Level Design**
 - **CVIEW**
 - Connections to Systems Within Florida
 - Connections to Systems Outside Florida

Florida CVISN State Design Template



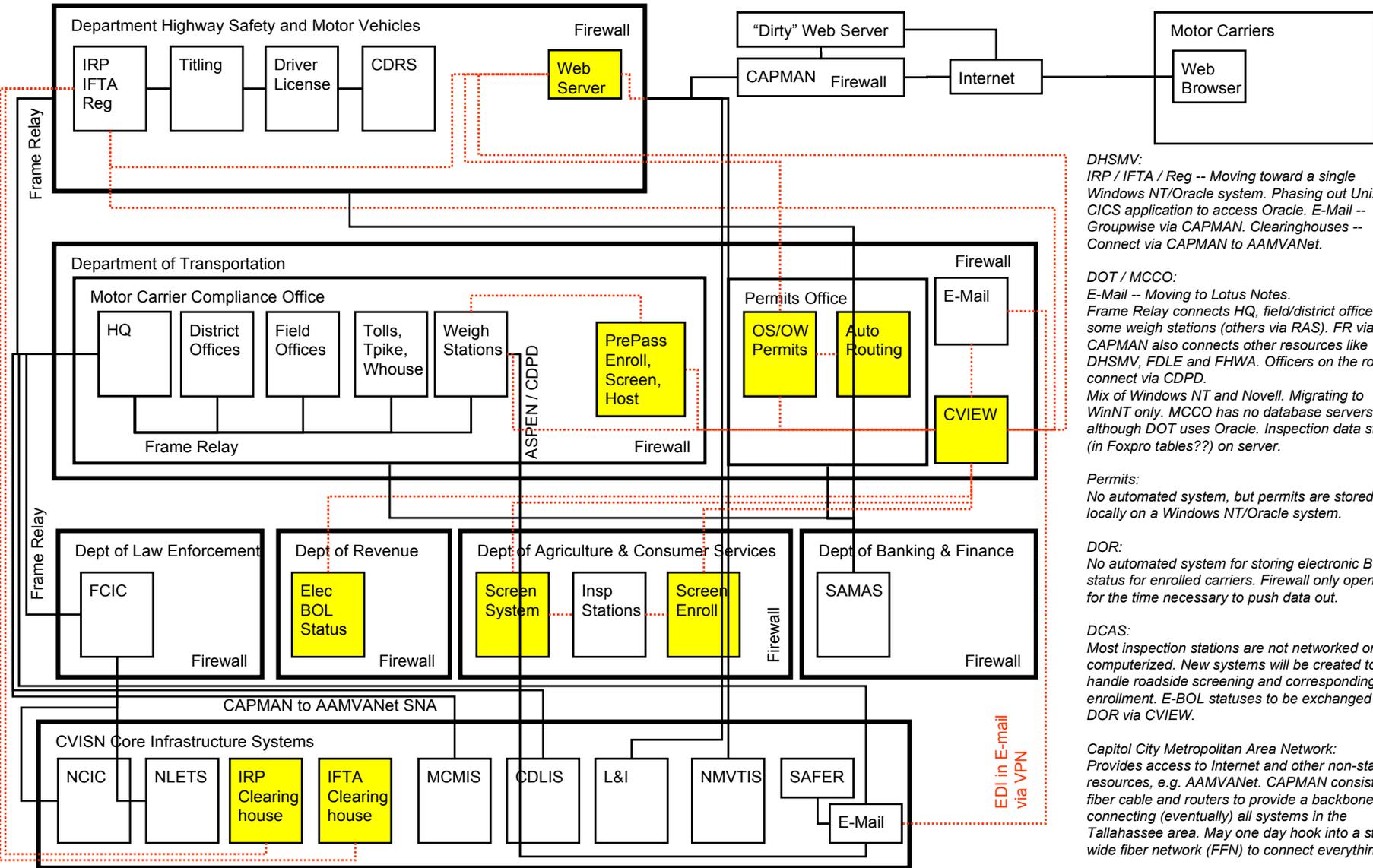
- Connectivity Type**
1. EDI
 2. Flat File
 3. DB Connection
 4. HTTP
 5. ASPEN
 6. Proprietary
 7. DSRC
 - ? Unknown





Florida CVISN Florida Network Template

CAPMAN to AAMVNet SNA



DHSMV:
 IRP / IFTA / Reg -- Moving toward a single Windows NT/Oracle system. Phasing out Unix. CICS application to access Oracle. E-Mail -- Groupwise via CAPMAN. Clearinghouses -- Connect via CAPMAN to AAMVNet.

DOT / MCCO:
 E-Mail -- Moving to Lotus Notes. Frame Relay connects HQ, field/district offices, some weigh stations (others via RAS). FR via CAPMAN also connects other resources like DHSMV, FDLE and FHWA. Officers on the road connect via CDPD. Mix of Windows NT and Novell. Migrating to WinNT only. MCCO has no database servers although DOT uses Oracle. Inspection data stored (in Foxpro tables??) on server.

Permits:
 No automated system, but permits are stored locally on a Windows NT/Oracle system.

DOR:
 No automated system for storing electronic BOL status for enrolled carriers. Firewall only opened for the time necessary to push data out.

DCAS:
 Most inspection stations are not networked or computerized. New systems will be created to handle roadside screening and corresponding enrollment. E-BOL statuses to be exchanged with DOR via CVIEW.

Capitol City Metropolitan Area Network:
 Provides access to Internet and other non-state resources, e.g. AAMVNet. CAPMAN consists of fiber cable and routers to provide a backbone for connecting (eventually) all systems in the Tallahassee area. May one day hook into a state-wide fiber network (FFN) to connect everything.

EDI in E-mail via VPN

Florida CVISN

Summary of New Systems



- **Electronic Credentials Administration**

- IFTA

- Web Interface/Application (if not provided by Uniface 7.26)
 - Link to "MyFlorida.com"
 - CVISN-wide electronic payment system
 - Automated system to download and incorporate quarterly tax rates for all jurisdictions

- IRP

- Web Interface/Application (if not provided by Uniface 7.26)
 - Link to "MyFlorida.com"
 - CVISN-wide electronic payment system

Florida CVISN

Summary of New Systems (continued)



- **Electronic Credentials Administration**

- Oversize/Overweight Permitting

- Web server to host and screen application
 - Routing review system to approve routes
 - Manually introduced impediment database to store temporary restrictions (construction, emergency situations, etc.)
 - CVISN-wide electronic payment system

- **Safety Information Exchange**

- None

Florida CVISN

Summary of New Systems (continued)



- **Electronic Screening**

- **CVIEW**

- Send carrier and vehicle event status updates to PrePass CVIEW for enrolled carriers
 - Allow CVIEW to be queried by PrePass for new enrollments and verifications

- **Agricultural/Bills of Lading Screening**

- On-line application for enrollment
 - Link to “MyFlorida.com”
 - Record enrollment decisions and upload decisions to CVIEW

Florida CVISN

Summary of New Systems (continued)



- **Electronic Screening**

- Agricultural/Bills of Lading Screening

- CVIEW

- Stores enrollment status of each carrier and transmits updates to either PrePass or the Agriculture Station Operations Center
 - May provide data to screen and bypass vehicles/carriers based on criteria established by DOR and DACS
 - Records screening events for reporting purposes

Florida CVISN

Summary of New Systems (continued)



- **Program-wide**
 - **CVIEW**
 - Receive and store information from state systems and provide information to state systems
 - Receive and store carrier and vehicle snapshots from SAFER and send carrier and vehicle snapshots to SAFER
 - May receive and store data from other federal safety data systems
 - Respond to carrier and vehicle queries from PrePass. CVIEW also will proactively inform PrePass of changes in credential status of enrolled carriers and vehicles
 - Web Credentials Interface will manage credential applications received electronically. System(s) also will deliver information on completed applications and credentials issued to CVIEW

Florida CVISN

Summary of Modifications Required to Existing Systems



- **Electronic Credentials Administration**
 - IFTA
 - Upgrade to Uniface 7.26
 - IRP
 - Upgrade to Uniface 7.26
 - **Oversize/Overweight Permitting**
 - Link RCI and PONTIS to OS/OW system
 - Incorporate RCI and PONTIS into routing decision

Florida CVISN

Summary of Modifications

Required to Existing Systems (continued)



- **Safety Information Exchange**
 - Deploy ASPEN 2.0
 - Transition to SAFETYNET 2000
 - Complete installation of CDPD for SAFER Connectivity

Florida CVISN

Summary of Modifications

Required to Existing Systems (continued)



- **Electronic Screening**
 - Agricultural/Bills of Lading Screening
 - Upgrade communications infrastructure from TCP/IP 56kb circuits to T1 or fiber optics (preferably)

Florida CVISN

Summary of Modifications Required to Existing Systems (continued)



- **Program-wide**

- **CVIEW**

- Oracle PL/SQL-based legacy system interface in CDRS
 - Modify IRP, IFTA and Vehicle Registration Systems to access CVIEW database (using views and stored procedures)
 - SQL or flat file interface with CVIEW for intrastate carrier registration system and citation system
 - Weigh station operations must be modified to send queries to CVIEW and receive/display the results
 - SAFER must establish carrier and vehicle snapshot subscriptions based on Florida's requirements – Universe of carrier data desired, universe of vehicle data desired, and FL mailbox (Modification to SAFER)
 - PrePass may query CVIEW for carrier and vehicle information and process the results during enrollment and when credential statuses change after enrollment (Modification to PrePass)



**Florida CVISN
Top-Level Design:
Electronic Credentials Administration
Program Area**



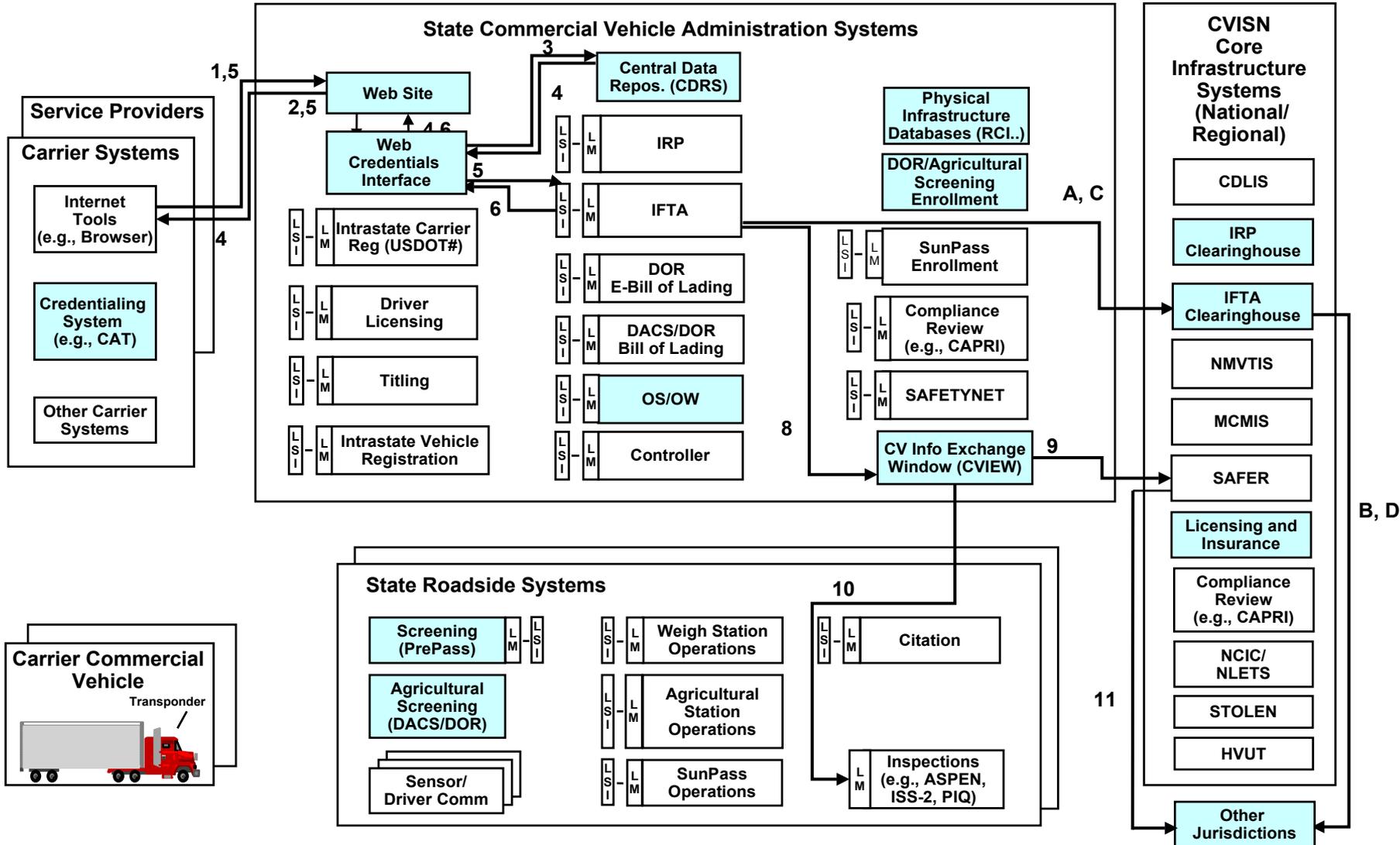
Florida CVISN Top-Level Design: IFTA Quarterly Tax Return

IFTA Quarterly Tax Return: Operational Scenario



- Accept and process electronic IFTA Tax Returns
 - Interact with the applicant electronically via a Web Browser and Web Site
 - Maintain snapshots for interstate operators by providing credential data for carriers and vehicles based in Florida to SAFER
 - Connect to the IFTA Clearinghouse to support the IFTA base state agreement

IFTA Quarterly Tax Return: Functional Thread Diagram



IFTA Quarterly Tax Return: Operational Scenario



1. **Carrier accesses DHSMV website (via “MyFlorida.com”) and selects IFTA Tax return option and inputs FEID/SSN and PIN number.**
2. **The Web Site passes this information to the Web Credentials Interface which queries IFTA legacy system for verification of IFTA account and pin number.**
3. **Web Credentials Interface submits query to its state’s database to perform account and pin number validations.**
4. **Legacy system returns positive confirmation to web server via the Web Credentials Interface along with account and tax due data.**
5. **Carrier enters tax return data, web server passes tax return data to the Web Credentials Interface, which passes the data to the Legacy IFTA system for calculation of tax return.**
6. **Legacy system returns calculated tax return to web server via the Web Credentials Interface.**
7. **Carrier prints tax return and forwards along with payment, if applicable, to the BMCS for processing (Note 1).**
8. **IFTA legacy systems updates CVIEW with account status based on tax return filings on a monthly basis.**
9. **CVIEW sends updated snapshot data daily to SAFER via EDI X12 285.**
10. **CVIEW sends updated snapshot data daily to Roadside via EDI X12 285.**
11. **SAFER makes updated snapshot data available to subscribers via EDI X12 285.**

IFTA Quarterly Tax Return: Operational Scenario



- ***Note 1: In future phases of the IFTA system enhancement, payment options will be provided so that carriers can complete the transaction online. These payment options have not yet been defined, and as a result, the financial institution processes will not be included on the thread diagrams.***
- ***Note 2: Projected date for participation in IFTA clearinghouse is 2003.***
- ***Note 3: Currently, updates to STOLEN are done manually however this process will become automated in the future.***

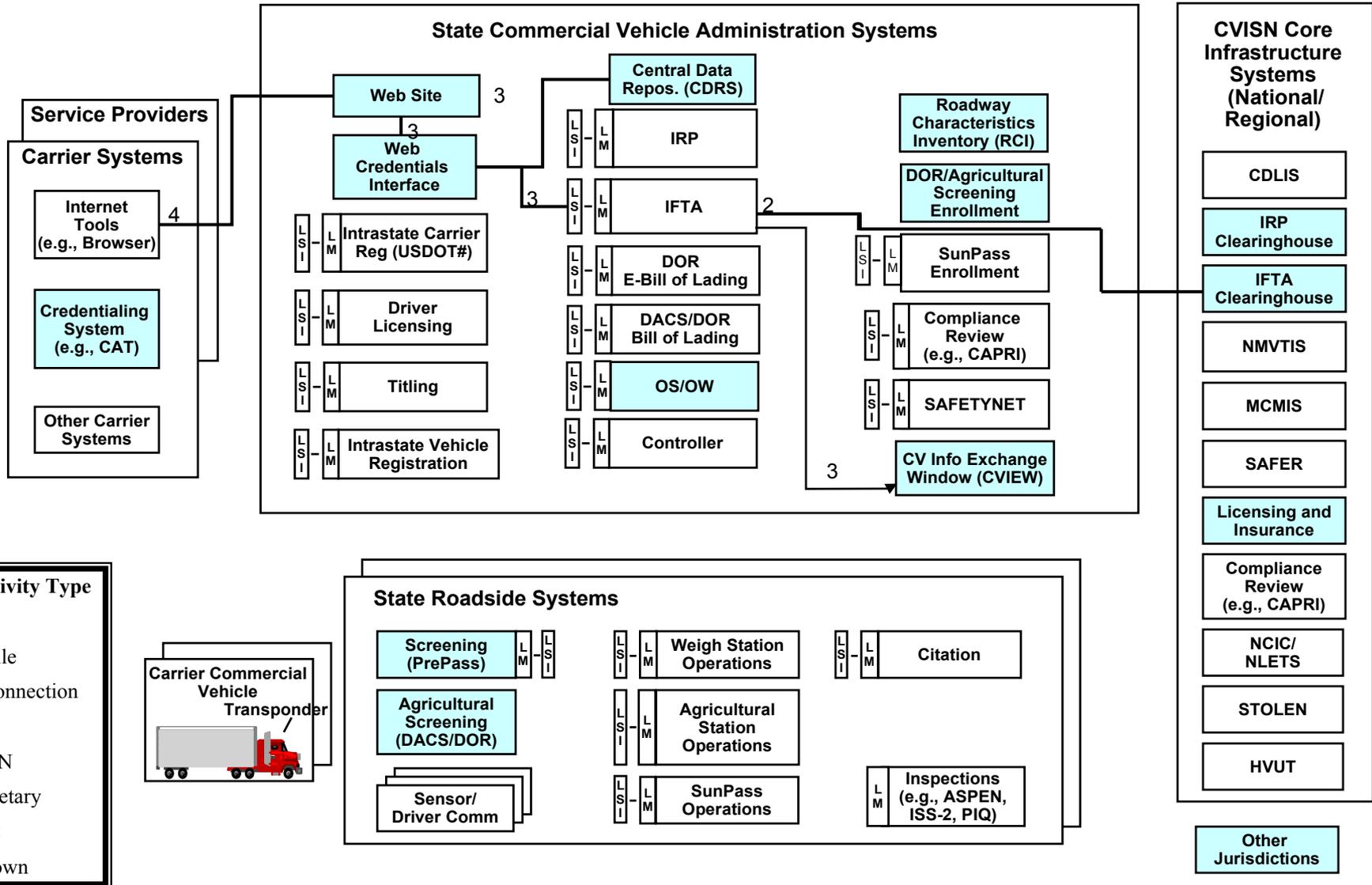
IFTA Quarterly Tax Return: Operational Scenario



-
- A. Monthly, the IFTA system sends updates to the IFTA Clearinghouse on IFTA Tax information and fee payments (transmittals).
 - B. Monthly, the IFTA Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. States review the information interactively using terminals.
 - C. The IFTA Office and other participating jurisdictions report the approvals or corrections back to the IFTA Clearinghouse. The approvals/corrections are made via terminals.
 - D. The IFTA Clearinghouse performs the actual netting and makes available corrected/approved tax and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. The information is reviewed via terminals.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

IFTA Quarterly Tax Return: System Connectivity



IFTA Quarterly Tax Return: Modifications Required to Existing Systems



- **Upgrade to version 7.26 of Uniface (will be web-enabled).**
 - Uniface is a GUI that communicates with Oracle.

IFTA Quarterly Tax Return: Functions to be Performed by New Systems



- **Develop Web Interface/Application (if not provided by version 7.26 of Uniface).**
- **Develop link to “MyFlorida.com.”**
- **CVISN-wide electronic payment system (still being considered).**
 - Several options currently exist
- **Create automated system to download and incorporate quarterly tax rates for all jurisdictions.**

IFTA Quarterly Tax Return: Top-Level Physical Design



Allocation of Functions to Computers

System:

- “MyFlorida.com” server
- Uniface
- DHSMV internal server
- CVISN-wide electronic payment system
- DHSMV legacy (CDRS) (Oracle)

Function:

Main link

House on-line application

Run process/application

Accounting/Payment

Long-term data system repository

IFTA Quarterly Tax Return: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-10)</u>
Presence on "MyFlorida.com"	Connectivity	L	5
Set-up internal web server to support IFTA web application	Build new	H	5

IFTA Quarterly Tax Return: Issues



- **Pending completion of feasibility of e-credential study.**
 - May impact timing and priority of projects
- **Considering whether there should be a link to “MyFlorida.com.”**
- **Need to develop a “Commercial Vehicle” links page on “MyFlorida.com.”**
- **Proposed decentralization of credentialing functions to tax collectors, regional DOT/DHSMV sites, or others will affect priority of all projects.**
- **Looking to develop a CVISN-wide payment option.**
 - Reconciliation issue with the State Treasurer’s Office

IFTA Quarterly Tax Return: Procurement Needs



- **The following procurement items are needed for the Department of Highway Safety and Motor Vehicles' Electronic Credentials Administration projects. These items will be shared among the individual IFTA and IRP projects:**
 - **Two Servers;**
 - **Uniface 7.26 (web-enabled);**
 - **Server Software;**
 - **Rack System;**
 - **Power Outlets;**
 - **Back-up Tapes; and**
 - **Network Infrastructure.**
- **Judy Johnson of DHSMV is the technical lead for the procurement of these items.**



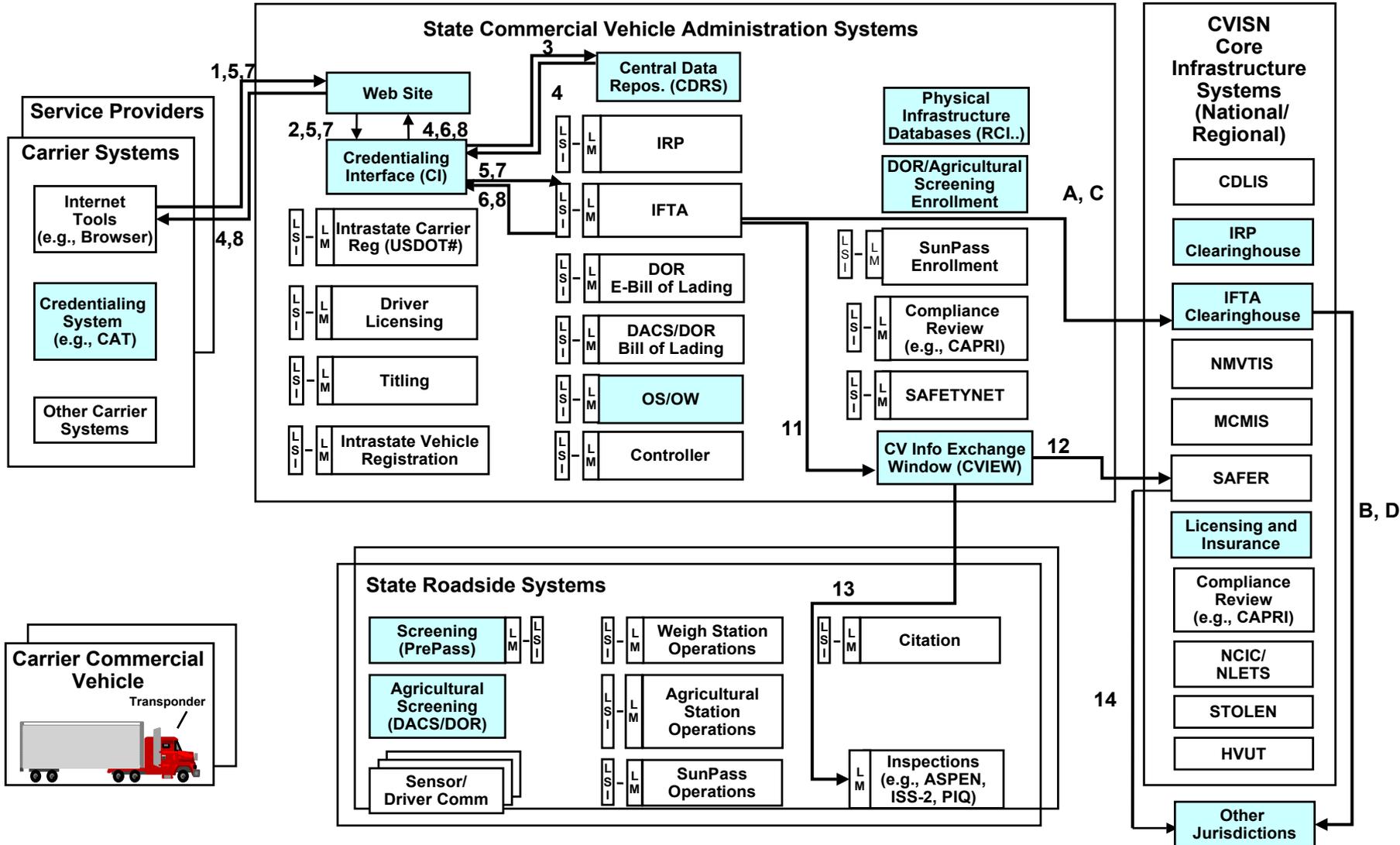
Florida CVISN Top-Level Design: IFTA Renewals

IFTA Renewals: Operational Scenario



- Accept and process electronic IFTA Renewals
 - Interact with the applicant electronically via a Web Browser and Web Site
 - Maintain snapshots for interstate operators by providing credential data for carriers and vehicles based in your state to SAFER
 - Connect to the IFTA Clearinghouse to support the IFTA base state agreement

IFTA Renewals: Functional Thread Diagram



IFTA Renewals: Operational Scenario



- 1. Carrier accesses DHSMV website (via “MyFlorida.com”) and selects IFTA Renewal option and inputs FEID/SSN and PIN number.**
- 2. The Web Site passes this information to the Web Credentials Interface which queries IFTA legacy system for verification of IFTA account and pin number.**
- 3. The Web Credentials Interface submits query to its states database to perform account and pin number validations.**
- 4. Legacy system returns positive confirmation to web server via the Web Credentials Interface along with account data.**
- 5. Carrier reviews social data related to the account, makes corrections as necessary, and indicates number of Supplemental requested. Web server passes renewal data to the Web Credentials Interface, which passes the data to the Legacy IFTA system for calculation of fees.**
- 6. Legacy system returns amount due to web server via the Web Credentials Interface.**
- 7. Carrier indicates payment method and provides necessary information (note 1). Web server forwards payment information to the IFTA legacy system via the Web Credentials Interface.**
- 8. IFTA legacy system generates Supplemental order and returns confirmation of order to carrier via the Web Credentials Interface and web server.**

IFTA Renewals: Operational Scenario



9. IFTA legacy system processes the IFTA renewal and Supplemental assignment through overnight processes.
 10. IFTA license and associated Supplemental are mailed to the carrier by BMCS personnel.
 11. IFTA legacy system updates CVIEW with account status based on tax return filings on a monthly basis.
 12. CVIEW sends updated snapshot data daily to SAFER via EDI X12 285.
 13. CVIEW sends updated snapshot data daily to Roadside via EDI X12 285.
 14. SAFER makes updated snapshot data available to subscribers via EDI X12 TS 285.
- *Note 1: Payment methods have not yet been fully defined, and as a result, financial institution process will not be shown on the thread diagram.*

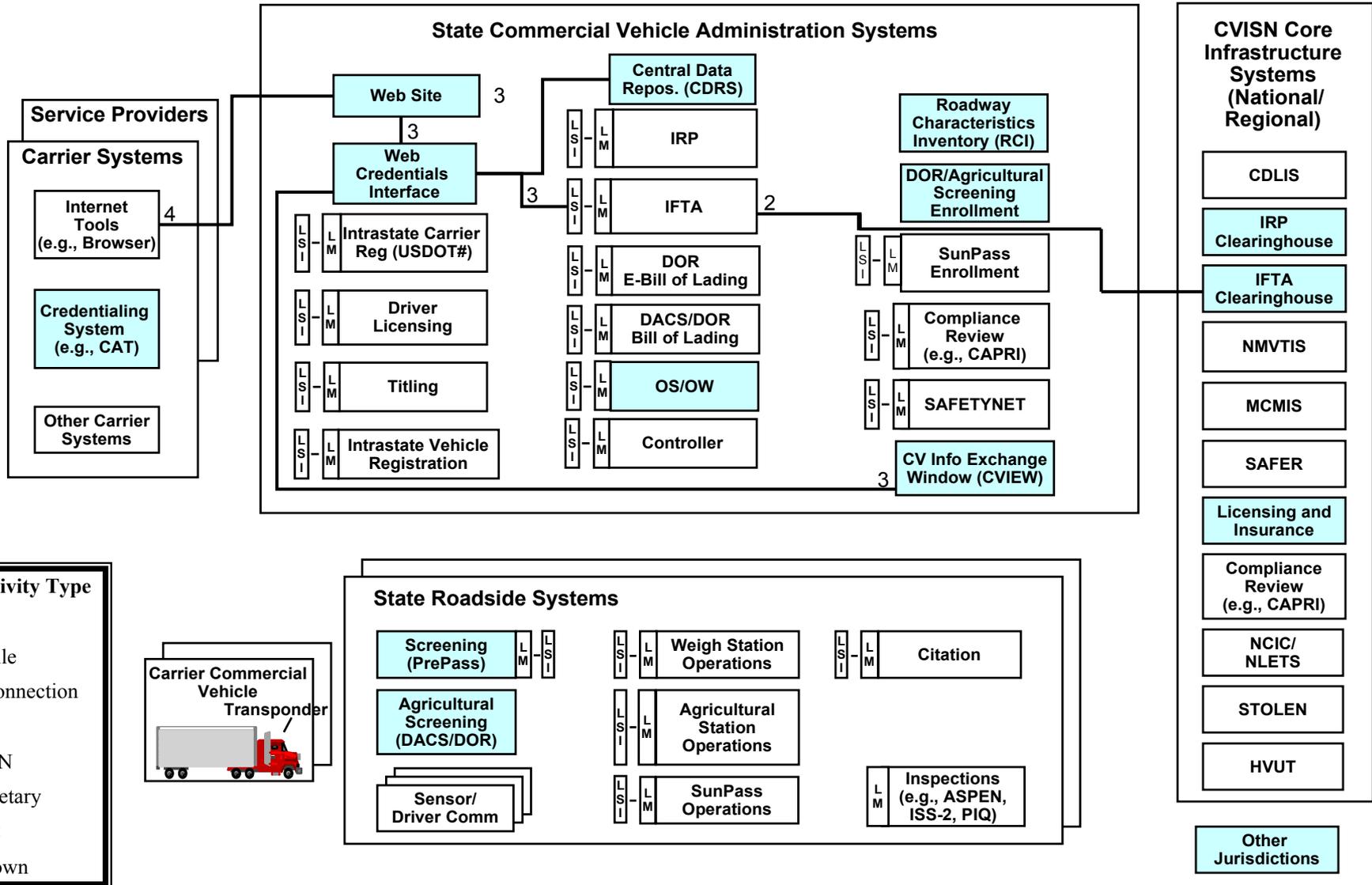
IFTA Renewals: Operational Scenario



- A. Monthly, the IFTA system sends updates to the IFTA Clearinghouse on IFTA Tax information and fee payments (transmittals).
- B. Monthly, the IFTA Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. States review the information interactively using terminals.
- C. The IFTA Office and other participating jurisdictions report the approvals or corrections back to the IFTA Clearinghouse. The approvals/corrections are made via terminals.
- D. The IFTA Clearinghouse performs the actual netting and makes available corrected/approved tax and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. The information is reviewed via terminals.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

IFTA Renewals: System Connectivity



Connectivity Type

1. EDI
2. Flat File
3. DB Connection
4. HTTP
5. ASPEN
6. Proprietary
7. DSRC
- ? Unknown

IFTA Renewals: Modifications Required to Existing Systems



- **Upgrade to version 7.26 of Uniface (will be web-enabled).**
 - Uniface is a GUI that communicates with Oracle.

IFTA Renewals: Functions to be Performed by New Systems



- **Develop Web Interface/Application (If not provided by version 7.26 of Uniface).**
- **Develop link to “MyFlorida.com.”**
- **CVISN-wide electronic payment system (still being considered).**
 - Several options currently exist

IFTA Renewals: Top-Level Physical Design



Allocation of Functions to Computers

System:

- “MyFlorida.com” server
- Uniface
- DHSMV internal server
- CVISN-wide electronic payment system
- DHSMV legacy (CDRS) (Oracle)

Function:

- Main link
- House on-line application
- Run process/application
- Accounting/Payment
- Long-term data system repository

IFTA Renewals: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-10)</u>
Presence on "MyFlorida.com"	Connectivity	L	5
Set-up internal web server to support IFTA web application	Build new	H	5

IFTA Renewals: Issues



- **Pending completion of feasibility of Electronic Credentials Feasibility study.**
 - May impact timing and priority of projects
- **Considering whether there should be a link to “MyFlorida.com.”**
- **Need to develop a “Commercial Vehicle” links page on “MyFlorida.com.”**
- **Proposed decentralization of credentialing functions to tax collectors, regional DOT/DHSMV sites, or others will affect priority of all projects.**
- **Looking to develop a CVISN-wide payment option.**
 - Reconciliation issue with the State Treasurer’s Office



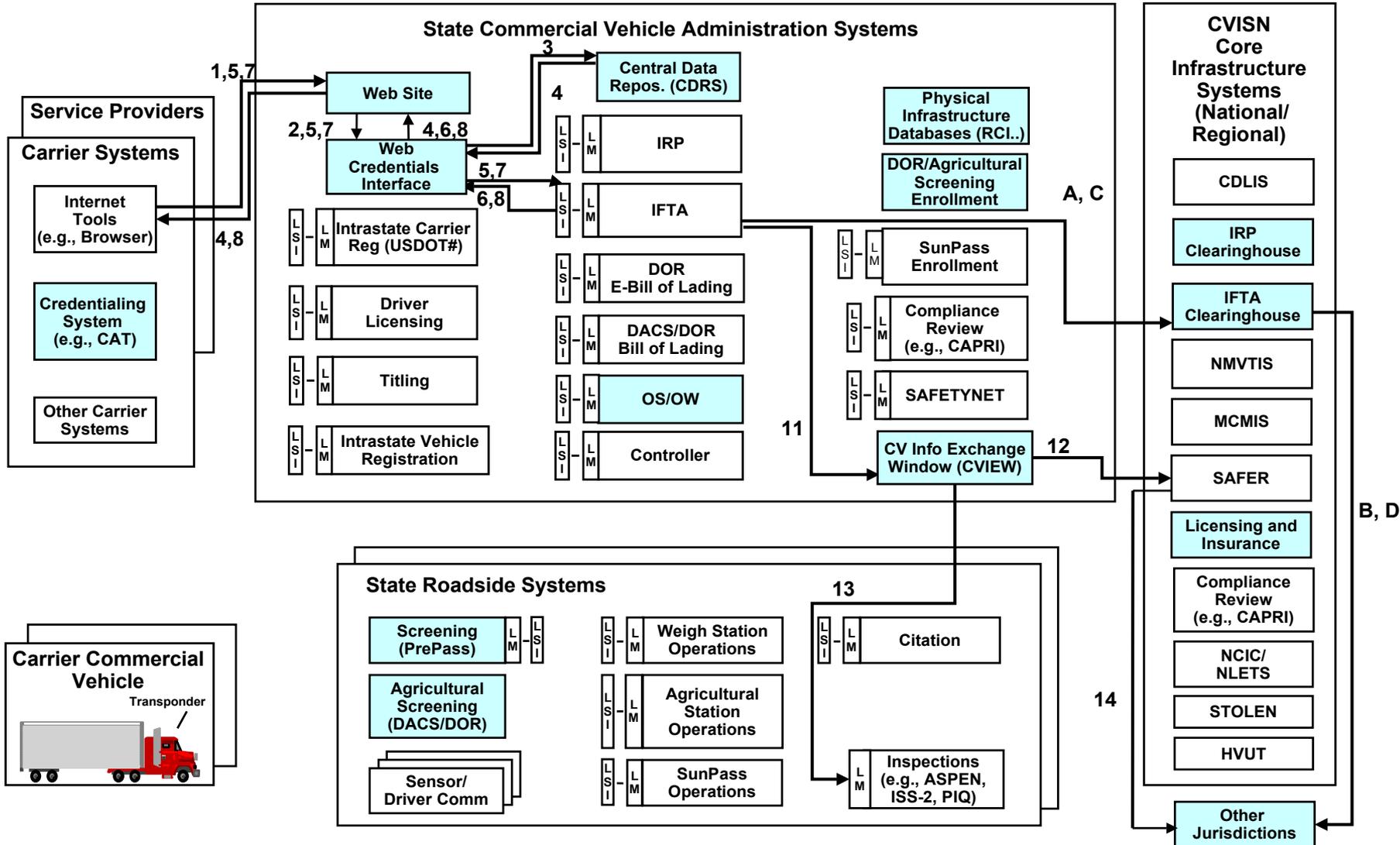
Florida CVISN Top-Level Design: IFTA Supplemental

IFTA Supplemental: Operational Scenario



- **Accept and process electronic IFTA Supplemental**
 - Interact with the applicant electronically via a Web Browser and Web Site
 - Maintain snapshots for interstate operators by providing credential data for carriers and vehicles based in your state to SAFER
 - Connect to the IFTA Clearinghouse to support the IFTA base state agreement

IFTA Supplemental: Functional Thread Diagram



IFTA Supplemental: Operational Scenario



- 1. Carrier accesses DHSMV website (via “MyFlorida.com”) and selects IFTA Decal option and inputs FEID/SSN and PIN number.**
- 2. The Web Site passes this information to the Web Credentials Interface which queries IFTA legacy system for verification of IFTA account and pin number.**
- 3. The Web Credentials Interface submits query to its states database to perform account and pin number validations.**
- 4. Legacy system returns positive confirmation to web server via the Web Credentials Interface along with account data.**
- 5. Carrier reviews social data related to the account, makes corrections as necessary, and indicates number of Supplemental requested. Web server passes renewal data to the Web Credentials Interface, which passes the data to the Legacy IFTA system for calculation of fees.**
- 6. Legacy system returns amount due to web server via the Web Credentials Interface.**
- 7. Carrier indicates payment method and provides necessary information (note 1). Web server forwards payment information to the IFTA legacy system via the Web Credentials Interface.**
- 8. IFTA legacy system generates decal order and returns confirmation of order to carrier via the Web Credentials Interface and web server.**

IFTA Supplemental: Operational Scenario



9. IFTA legacy system processes the IFTA renewal and decal assignment through overnight process.
 10. IFTA license and associated decal are mailed to the carrier by BMCS personnel.
 11. IFTA legacy system updates CVIEW with account status based on tax return filings on a monthly basis.
 12. CVIEW sends updated snapshot data daily to SAFER via EDI X12 285.
 13. CVIEW sends updated snapshot data daily to Roadside via EDI X12 285.
 14. SAFER makes updated snapshot data available to subscribers via EDI X12 TS 285.
- *Note 1: Payment methods have not yet been fully defined, and as a result, financial institution process will not be shown on the thread diagram.*

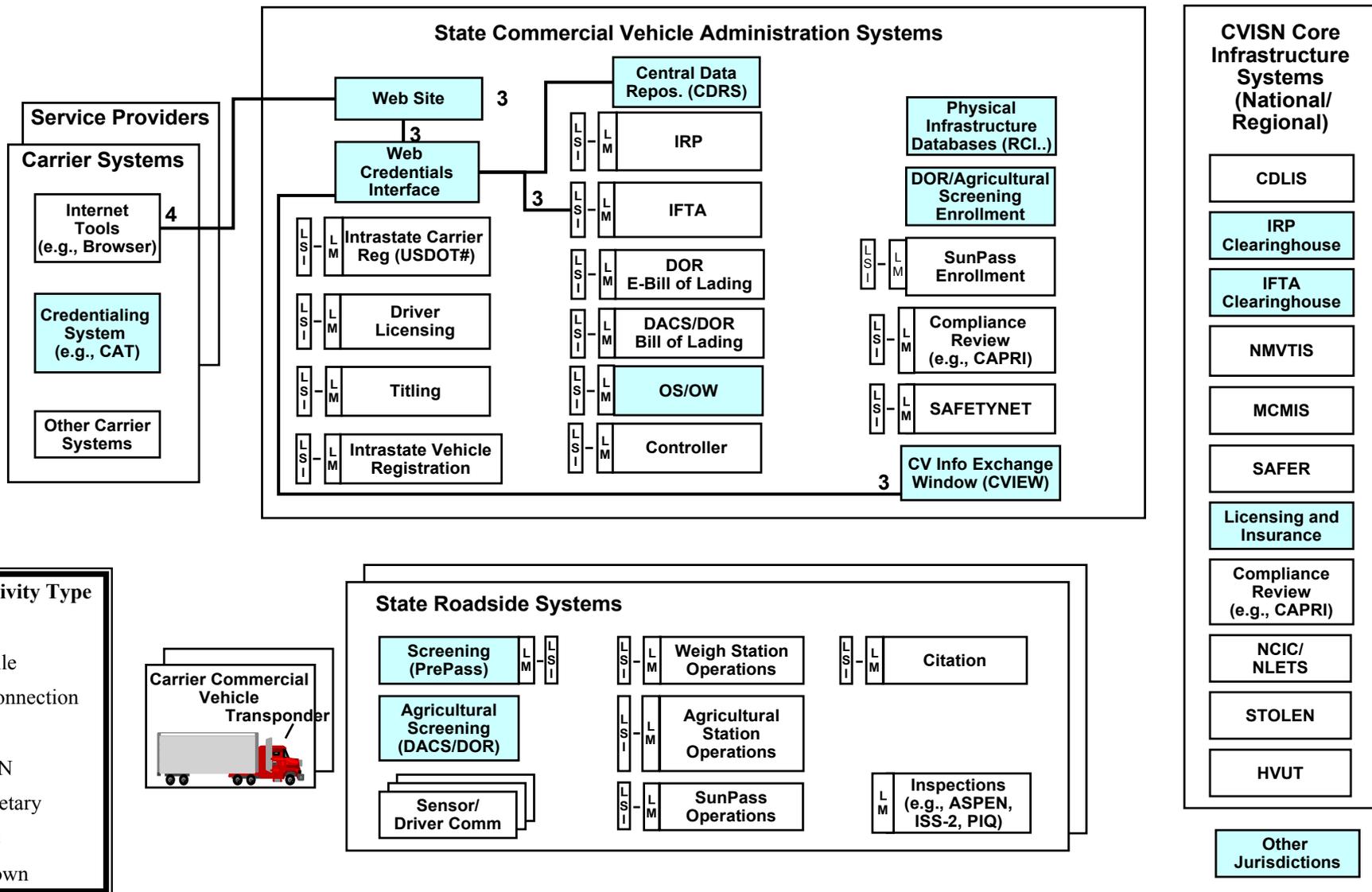
IFTA Supplemental: Operational Scenario



- A. Monthly, the IFTA system sends updates to the IFTA Clearinghouse on IFTA Tax information and fee payments (transmittals).
- B. Monthly, the IFTA Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. States review the information interactively using terminals.
- C. The IFTA Office and also other participating jurisdictions report back to the IFTA Clearinghouse the approvals or corrections. The approvals/corrections are made via terminals.
- D. The IFTA Clearinghouse performs the actual netting and makes available corrected/approved tax and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. The information is reviewed via terminals.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

IFTA Supplemental: System Connectivity



IFTA Supplemental: Modifications Required to Existing Systems



- **Upgrade to version 7.26 of Uniface (will be web-enabled).**
 - Uniface is a GUI that communicates with Oracle

IFTA Supplemental: Functions to be Performed by New Systems



- **Develop Web Interface/Application (If not provided by version 7.26 of Uniface).**
- **Develop link to “MyFlorida.com.”**
- **CVISN-wide electronic payment system (still being considered).**
 - Several options currently exist

IFTA Supplemental: Top-Level Physical Design



Allocation of Functions to Computers

System:

- “MyFlorida.com” server
- Uniface
- DHSMV internal server
- CVISN-wide electronic payment system
- DHSMV legacy (CDRS) (Oracle)

Function:

- Main link
- House on-line application
- Run process/application
- Accounting/Payment
- Long-term data system repository

IFTA Supplemental: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-10)</u>
Presence on "MyFlorida.com"	Connectivity	L	5
Set-up internal web server to support IFTA web application	Build new	H	5

IFTA Supplemental: Issues



- **Pending completion of feasibility of Electronic Credentials Feasibility Study.**
 - May impact timing and priority of projects
- **Considering whether there should be a link to “MyFlorida.com.”**
- **Need to develop a “Commercial Vehicle” links page on “MyFlorida.com.”**
- **Proposed decentralization of credentialing functions to tax collectors, regional DOT/DHSMV sites, or others will affect priority of all projects.**
- **Looking to develop a CVISN-wide payment option.**
 - Reconciliation issue with the State Treasurer’s Office



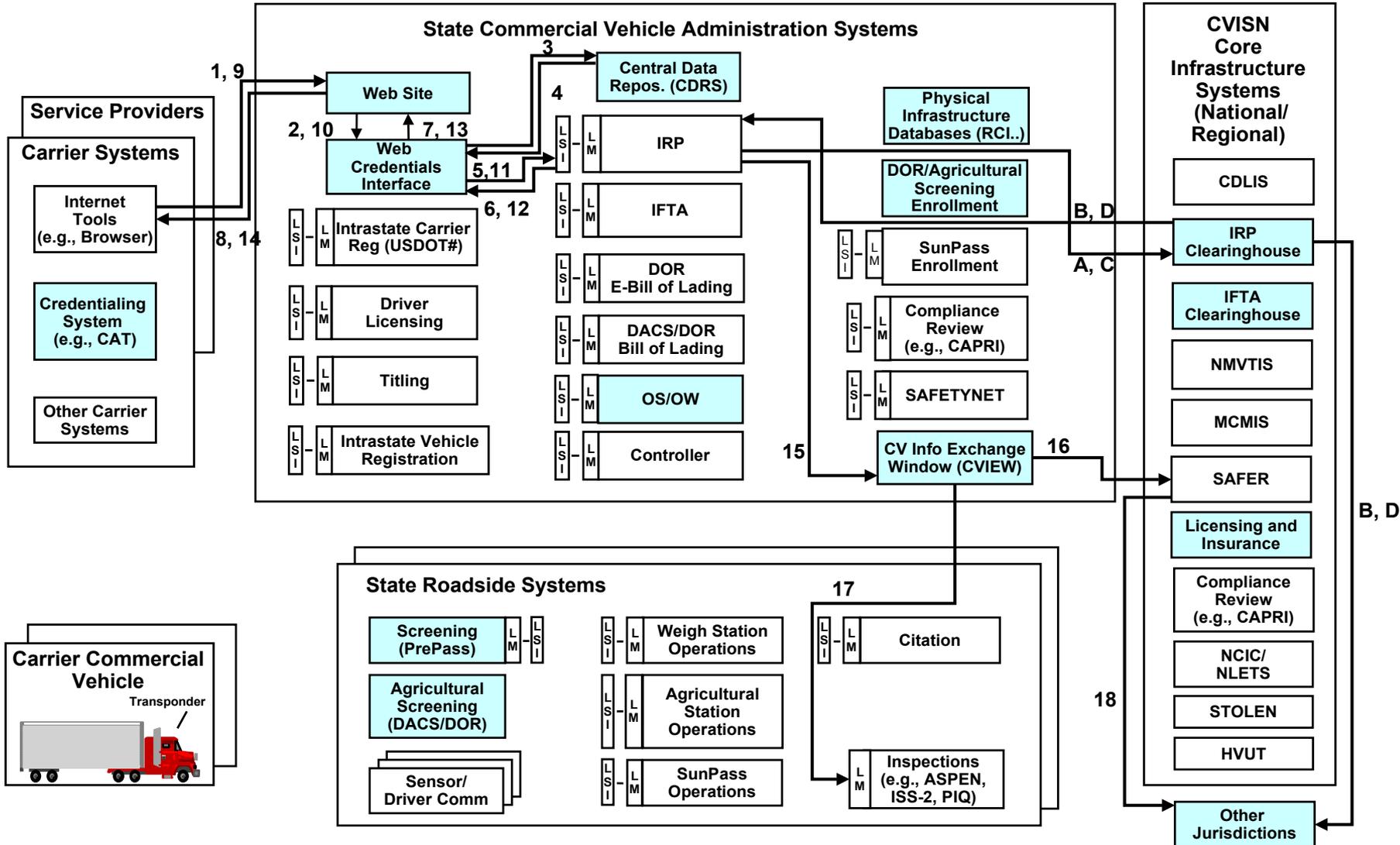
Florida CVISN Top-Level Design: IRP Supplemental

IRP Supplemental: Operational Scenario



- Accept and process electronic IRP credential applications for supplements
 - Interact with the applicant electronically via a Web Browser and Web Site
 - Maintain snapshots for interstate operators by providing credential data for carriers and vehicles based in Florida to SAFER
 - Connect to the IRP Clearinghouse to support the IRP base state agreement

IRP Supplemental: Functional Thread Diagram



IRP Supplemental: Operational Scenario



1. **Carrier enters an IRP credential application via a Web browser to a state-based Web Site (accessed via “MyFlorida.com”).**
2. **The Web Site passes this information to the Web Credentials Interface.**
3. **The Web Credentials Interface submits a query to its state database to perform preliminary checks as part of evaluating the application.**
4. **The state database reports the status, i.e., flags and condition to the Web Credentials Interface.**
5. **If a satisfactory status is received, the application is sent to the IRP system for processing via EDI X12 TS 286 or other format to be determined.**
6. **The IRP system processes the application and sends an invoice notice to the Web Credentials Interface via EDI X12 TS 286 or other format to be determined.**
7. **The Web Credentials Interface sends the invoice notice to the Web Site and maintains archival/audit copies of all transactions.**
8. **The carrier retrieves the invoice notice from the state Web Site using a Web Browser.**
9. **The carrier reviews the invoice data and verifies that the application data matches the intent. The carrier indicates payment method information via the Web Browser to the Web Site.**

IRP Supplemental: Operational Scenario



10. The Web Site passes it to the Web Credentials Interface.
11. The Web Credentials Interface verifies payment method information (financial system interfaces are not shown) and passes payment approval to the IRP system via EDI X12 TS 286 or other format to be determined.
12. The IRP system validates payment amount and updates application status to indicate the permanent credential granted and notifies the Web Credentials Interface via EDI X12 TS 286 or other format to be determined.
13. The Web Credentials Interface passes the permanent credential to the Web Site.
14. The carrier receives confirmation of transaction and that Cab Cards and tag are being mailed.
15. The IRP Legacy system updates CVIEW with permanent credential information daily via EDI X12 TS 285 or other format to be determined.
16. CVIEW sends updated snapshot data daily to SAFER via EDI X12 285.
17. CVIEW sends updated snapshot data daily to Roadside via EDI X12 285.
18. SAFER makes updated snapshot data available to subscribers via EDI X12 TS 285.

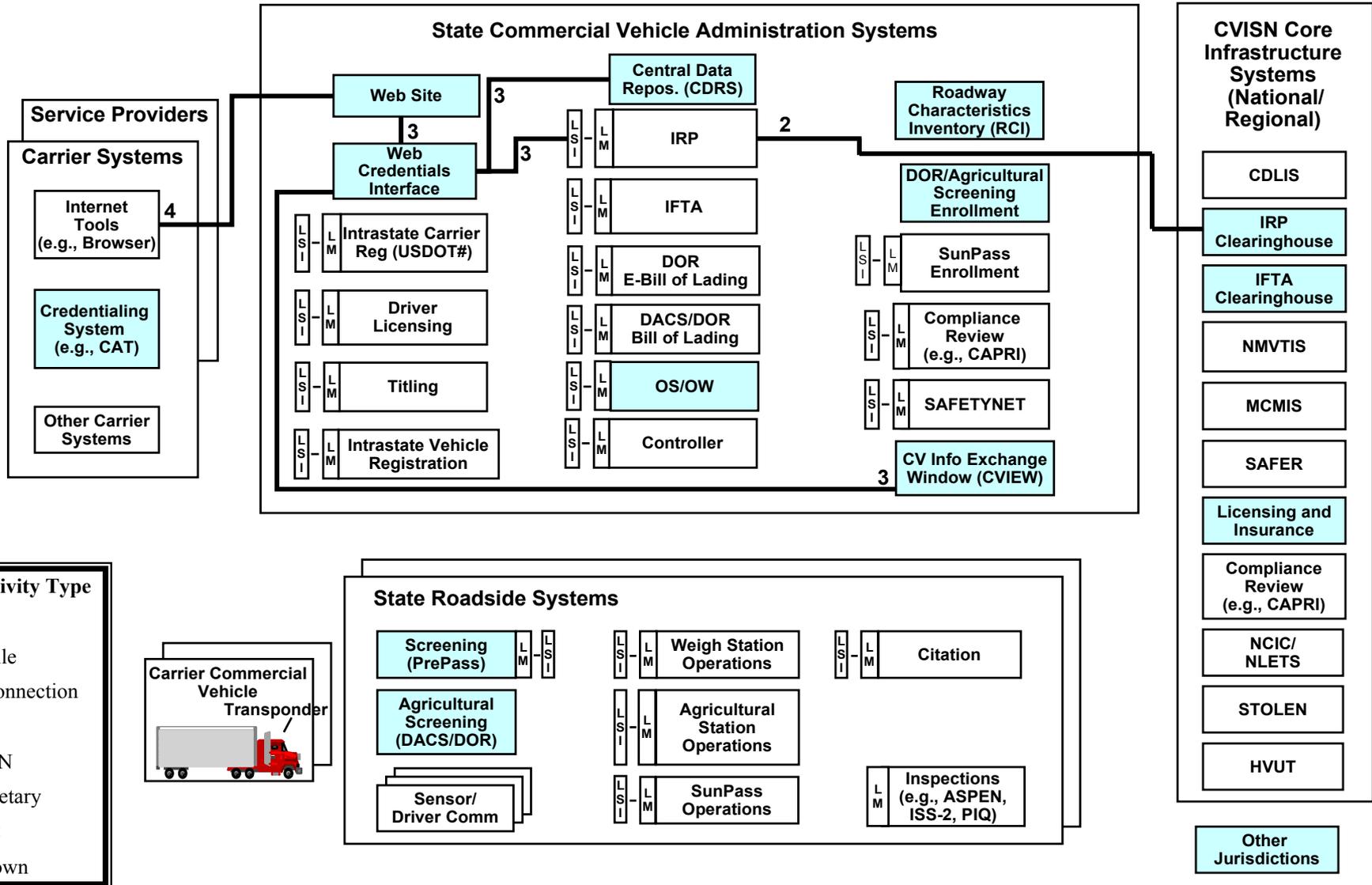
IRP Supplemental: Operational Scenario



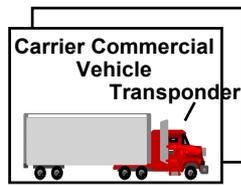
- A. Monthly, the IRP system sends updates to the IRP Clearinghouse on IRP registration information and fee payments (recaps).**
- B. Monthly, the IRP Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. States review the information interactively using terminals.**
- C. The IRP Office and also other participating jurisdictions report back to the IRP Clearinghouse the approvals or corrections. The approvals/corrections are made via terminals.**
- D. The IRP Clearinghouse performs the actual netting and makes available corrected/approved vehicle and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. The information is reviewed via terminals. This information will in turn get keyed into the IRP legacy system.**

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

IRP Supplemental: System Connectivity



- Connectivity Type**
1. EDI
 2. Flat File
 3. DB Connection
 4. HTTP
 5. ASPEN
 6. Proprietary
 7. DSRC
 - ?. Unknown



IRP Supplemental: Modifications Required to Existing Systems



- **Upgrade to version 7.26 of Uniface (will be web-enabled).**
 - Uniface is a GUI that communicates with Oracle

IRP Supplemental: Functions to be Performed by New Systems



- **Develop Web Interface/Application (if not provided by version 7.26 of Uniface).**
- **Develop link to “MyFlorida.com.”**
- **CVISN-wide electronic payment system (still being considered).**
 - Several options currently exist

IRP Supplemental: Top-Level Physical Design



Allocation of Functions to Computers

System:

- “MyFlorida.com” server
- Uniface
- DHSMV internal server
- CVISN-wide electronic payment system
- DHSMV legacy (CDRS) (Oracle)

Function:

Main link

House on-line application

Run process/application

Accounting/Payment

Long-term data system repository

IRP Supplemental: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-10)</u>
Presence on “MyFlorida.com”	Connectivity	L	6
Set-up internal web server to support IRP web application	Build new	H	5

IRP Supplemental: Issues



- **Question of allowing carrier to view its history- this is working with the assumption that no one outside the state has CVIEW, thus carriers would not be able to do this under the current design.**
- **Due to online processing constraints the number of vehicles allowed for a particular transaction will be limited; however, this limit has not yet been established.**
- **Certain regulatory issues related to the verification of items such as HVUT, insurance, etc. by way of paper documentation must be resolved prior to electronic IRP renewal transaction being fully completed to the point of credential issuance.**
- **Projected date for participation in IRP clearinghouse is 2001.**

IRP Supplemental: Procurement Needs



PROCUREMENT ITEM	WHAT	CATEGORY	FUNDING SOURCE	TECHNICAL LEAD FOR REQTS
IRP Supplemental Processing Interface		Software Development	DHSMV	Judy Johnson



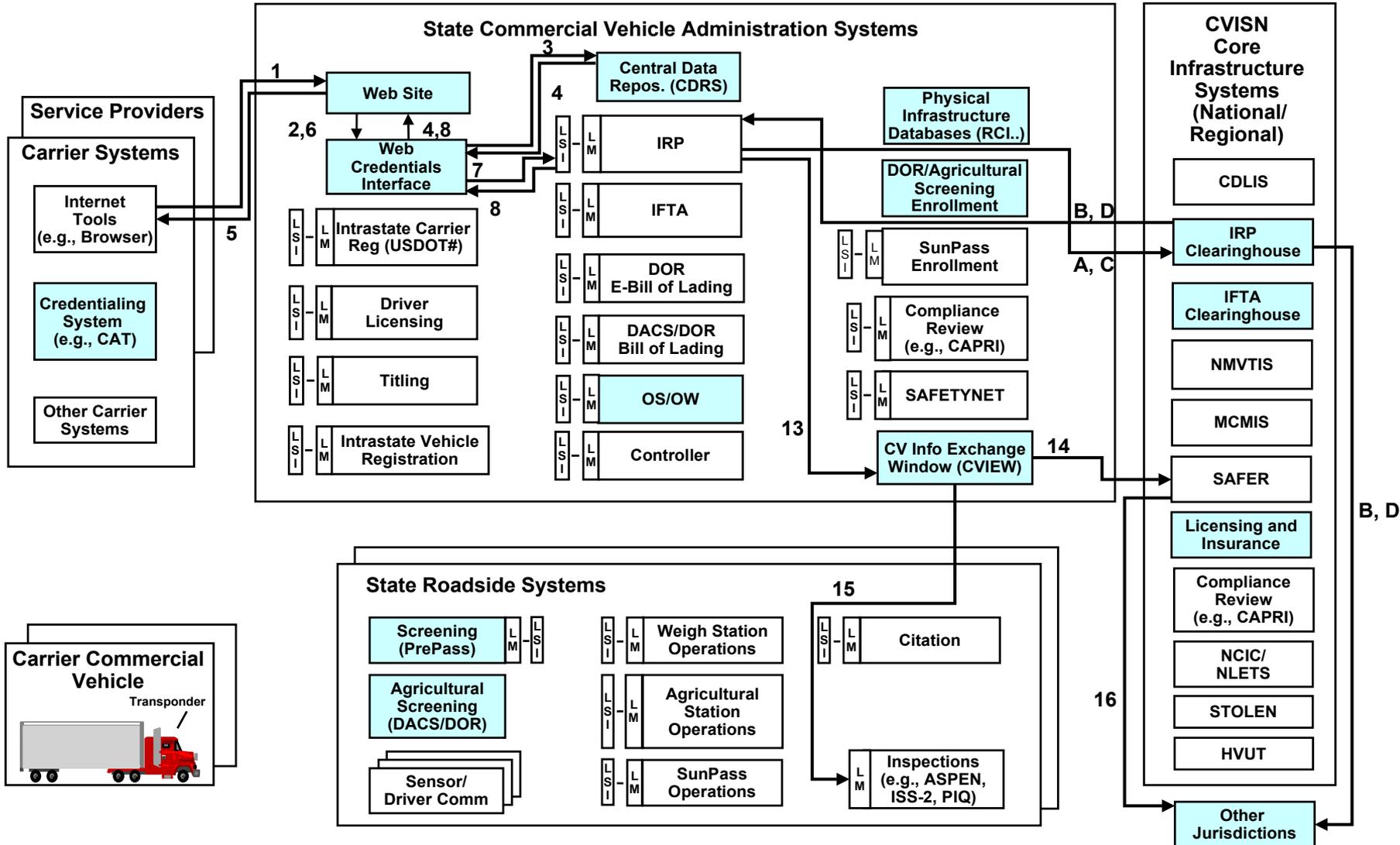
Florida CVISN Top-Level Design: IRP Renewals

IRP Renewals: Operational Scenario



- Accept and process electronic IRP credential applications for Renewals
 - Interact with the applicant electronically via a Web Browser and Web Site
 - Maintain snapshots for interstate operators by providing credential data for carriers and vehicles based in Florida to SAFER
 - Connect to the IRP Clearinghouse to support the IRP base state agreement

IRP Renewals: Functional Thread Diagram



IRP Renewals: Operational Scenario



- 1. Carrier enters an IRP credential application via a Web browser to a state-based Web Site (accessed via “MyFlorida.com”) and enters the account, fleet and pin number.**
- 2. The Web Site passes this information to the Web Credentials Interface which queries IRP legacy system for verification of IRP account, fleet and pin number.**
- 3. Web Credentials Interface submits query to its states database to perform account and pin number validations.**
- 4. Legacy system returns positive confirmation to web server via the Web Credentials Interface along with account and vehicle data.**
- 5. Carrier selects renewal options, appropriate forms are returned by web page server, and carrier completes the required information.**
- 6. Web page server application verifies the renewal data for completeness and forwards data to CI or Web Interface.**
- 7. Web Credentials Interface forwards renewal renewal data to IRP legacy system for processing (Note 1).**
- 8. IRP Legacy system processes renewal application and returns a detailed bill amount or error code message, as appropriate, to the Web Credentials Interface which is then passed to the web server.**
- 9. Carrier prints IRP bill and mails it along with the necessary supporting documentation such as HVUT, insurance, lease agreement, etc and the payment amount to the BMCS for processing (Note 2) (Note 3).**

IRP Renewals: Operational Scenario



10. **BMCS receives and enters payment information and request for credentials into the IRP Legacy system.**
 11. **IRP Legacy system process credential request through overnight process.**
 12. **IRP cab cards and license plates are sent via mail to the carrier.**
 13. **The IRP Legacy system updates CVIEW with permanent credential information daily via EDI X12 TS 285 or other format to be determined.**
 14. **CVIEW sends updated snapshot data daily to SAFER via EDI X12 285.**
 15. **CVIEW sends updated snapshot data daily to Roadside via EDI X12 285.**
 16. **SAFER makes updated snapshot data available to subscribers via EDI X12 TS 285.**
- *Note 1: For the Web based IRP renewal application process, due to online processing constraints the number of vehicles allowed for a particular transaction will be limited; however, this limit has not yet been established.*
 - *Note 2: In future phases of the IRP system enhancement, payment options will be provided so that carrier can complete the transaction online. These payment options have not yet been defined, and as a result, the financial institution processes will not be included on the thread diagrams.*
 - *Note 3: Certain regulatory issues related to the verification of items such as HVUT, insurance, etc by way of paper documentation must be resolved prior to electronic IRP renewal transaction being fully completed to the point of credential issuance.*
 - *Note 4: Projected date for participation in IRP clearinghouse is 2001.*

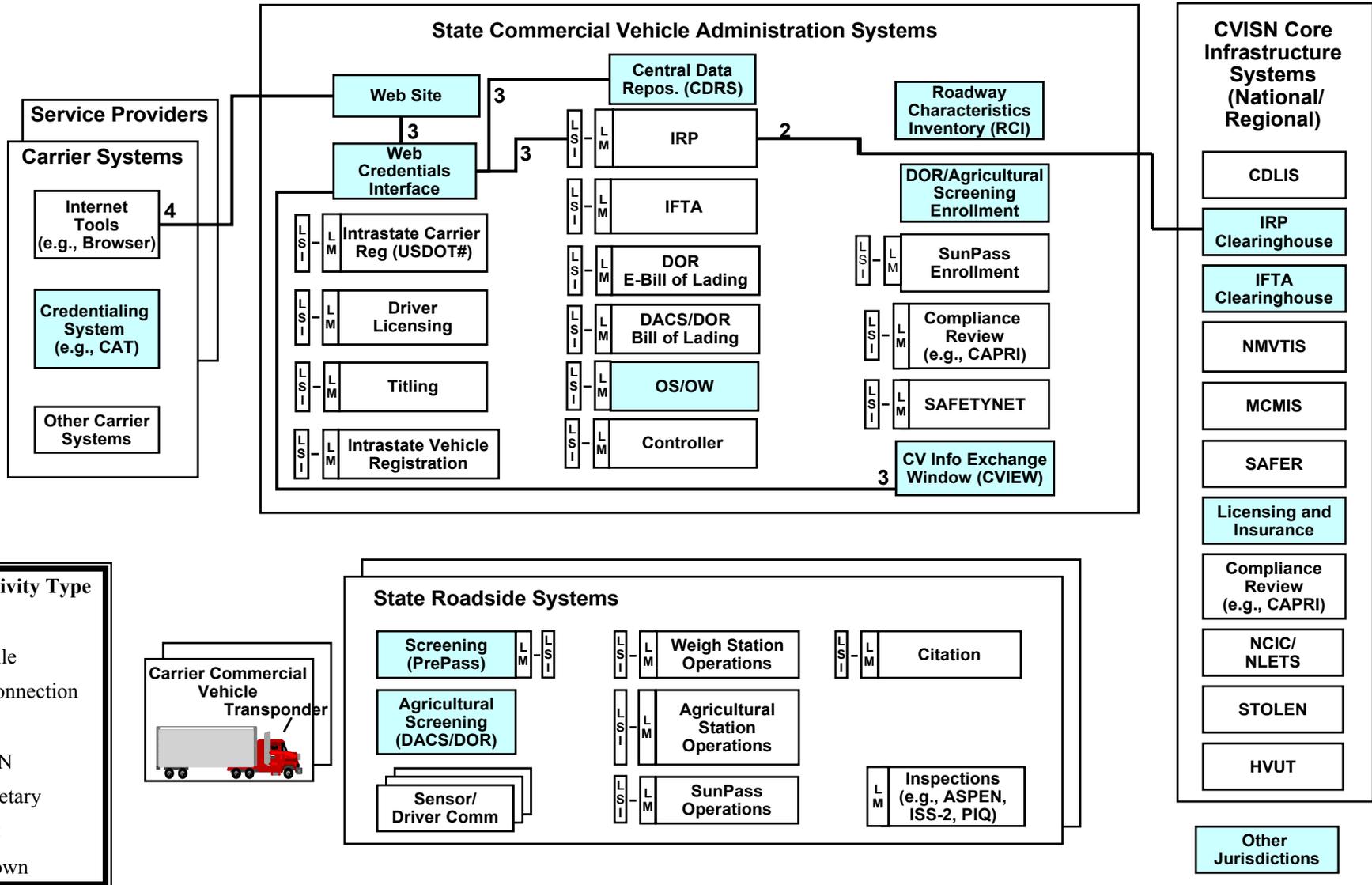
IRP Renewals: Operational Scenario



- A. Monthly, the IRP system sends updates to the IRP Clearinghouse on IRP registration information and fee payments (recaps).**
- B. Monthly, the IRP Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. States review the information interactively using terminals.**
- C. The IRP Office and also other participating jurisdictions report back to the IRP Clearinghouse the approvals or corrections. The approvals/corrections are made via terminals.**
- D. The IRP Clearinghouse performs the actual netting and makes available corrected/approved vehicle and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. The information is reviewed via terminals. This information will in turn get keyed into the IRP legacy system.**

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

IRP Renewals: System Connectivity



IRP Renewals: Modifications Required to Existing Systems



- **Upgrade to Version 7.26 of Uniface (will be web-enabled).**
 - Uniface is a GUI that communicates with Oracle

IRP Renewals: Functions to be Performed by New Systems



- **Develop Web Interface/Application (If not provided by version 7.26 of Uniface).**
- **Develop link to “MyFlorida.com.”**
- **CVISN-wide electronic payment system (still being considered).**
 - Several options currently exist

IRP Renewals: Top-Level Physical Design



Allocation of Functions to Computers

System:

- “MyFlorida.com” server
- Uniface
- DHSMV internal server
- CVISN-wide electronic payment system
- DHSMV legacy (CDRS) (Oracle)

Function:

Main link

House on-line application

Run process/application

Accounting/Payment

Long-term data system repository

IRP Renewals: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-10)</u>
Presence on "MyFlorida.com"	Connectivity	L	6
Set-up internal web server to support IRP web application	Build new	H	5

IRP Renewals: Issues



- **Due to online processing constraints the number of vehicles allowed for a particular transaction will be limited; however, this limit has not yet been established.**
- **Certain regulatory issues related to the verification of items such as HVUT, insurance, etc. by way of paper documentation must be resolved prior to electronic IRP renewal transaction being fully completed to the point of credential issuance.**
- **Projected date for participation in IRP clearinghouse is 2001.**

IRP Renewals: Procurement Needs



PROCUREMENT ITEM	WHAT	CATEGORY	FUNDING SOURCE	TECHNICAL LEAD FOR REQTS
IRP Renewal Processing Interface		COTS	Multi-Agency	Jerry Scruggs



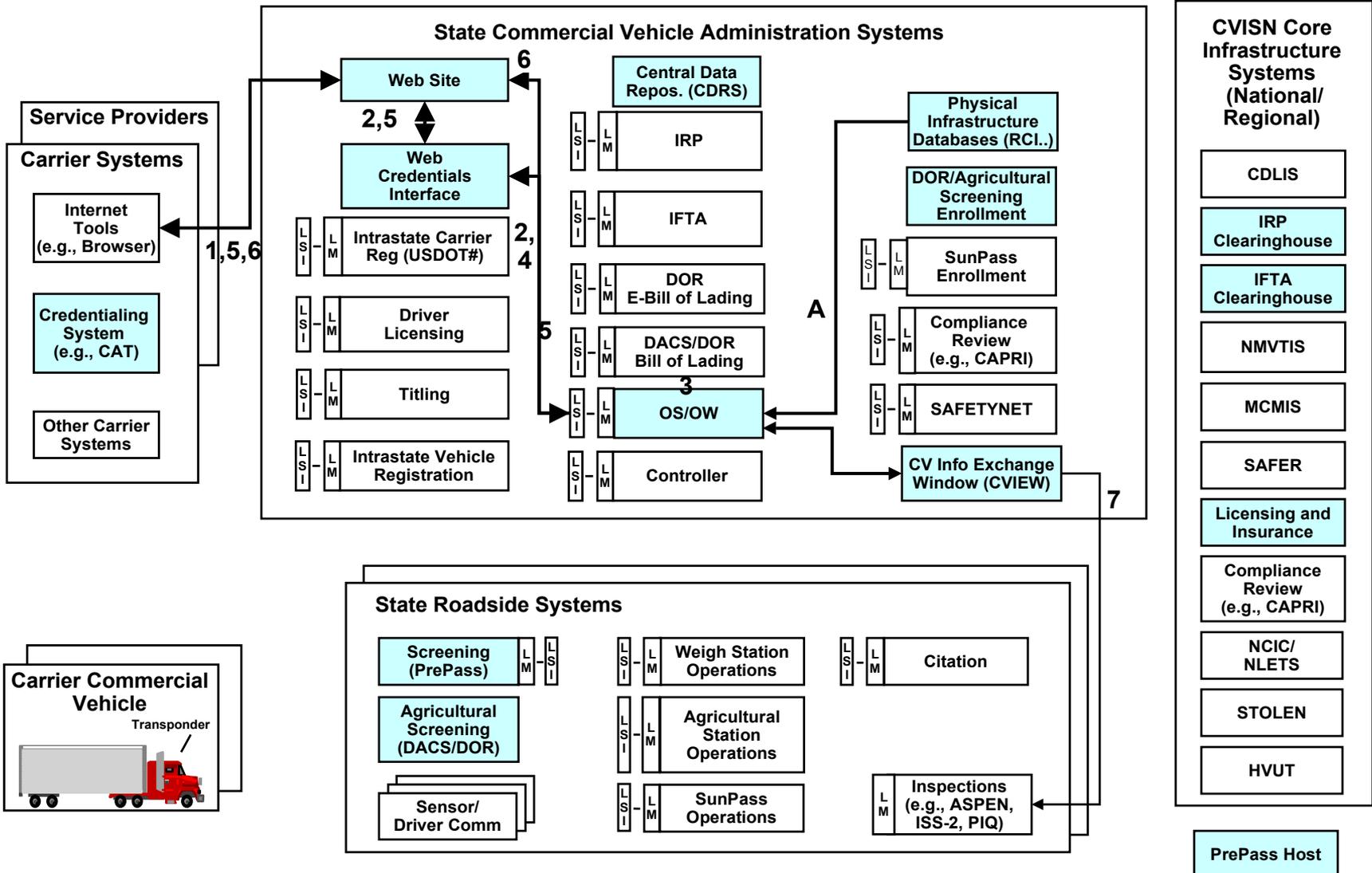
Florida CVISN Top-Level Design: Oversize/Overweight Permitting

Oversize/Overweight Permitting: Operational Scenario



- **Electronically accept oversize/overweight permit application for both blanket and trip permits.**
 - System will include “error-check” and screening functions
- **Electronically review and approve (for certain thresholds) oversize/overweight routes for trip permits.**
- **Accept electronic payment for both blanket and trip permits.**
- **Provide “up-front” route information to carriers for pre-trip and bid planning.**

Oversize/Overweight Permitting: Functional Thread Diagram



Oversize/Overweight Permitting Operational Scenario



Functions with numbers occur in real-time or near real-time.

- 1. CVO accesses OS/OW Permit web page and completes application.**
 - OS/OW System checks application for accuracy and completeness
- 2. Application transmitted via Credentials or Web Interface to OS/OW System in Tallahassee.**
- 3. Route will be analyzed against applicable process.**
- 4. A single CVISN-wide electronic payment system will be developed as a separate project. Payment system will operate on invoice data sent from the legacy system.**
- 5. OS/OW System (depending on thresholds) issues permit (back through the web browser)**
- 6. System also will assist carriers develop approved routes for pre-trip planning and bidding purposes.**
- 7. OS/OW system will deliver permit data to CVIEW in near real-time for use at the roadside.**

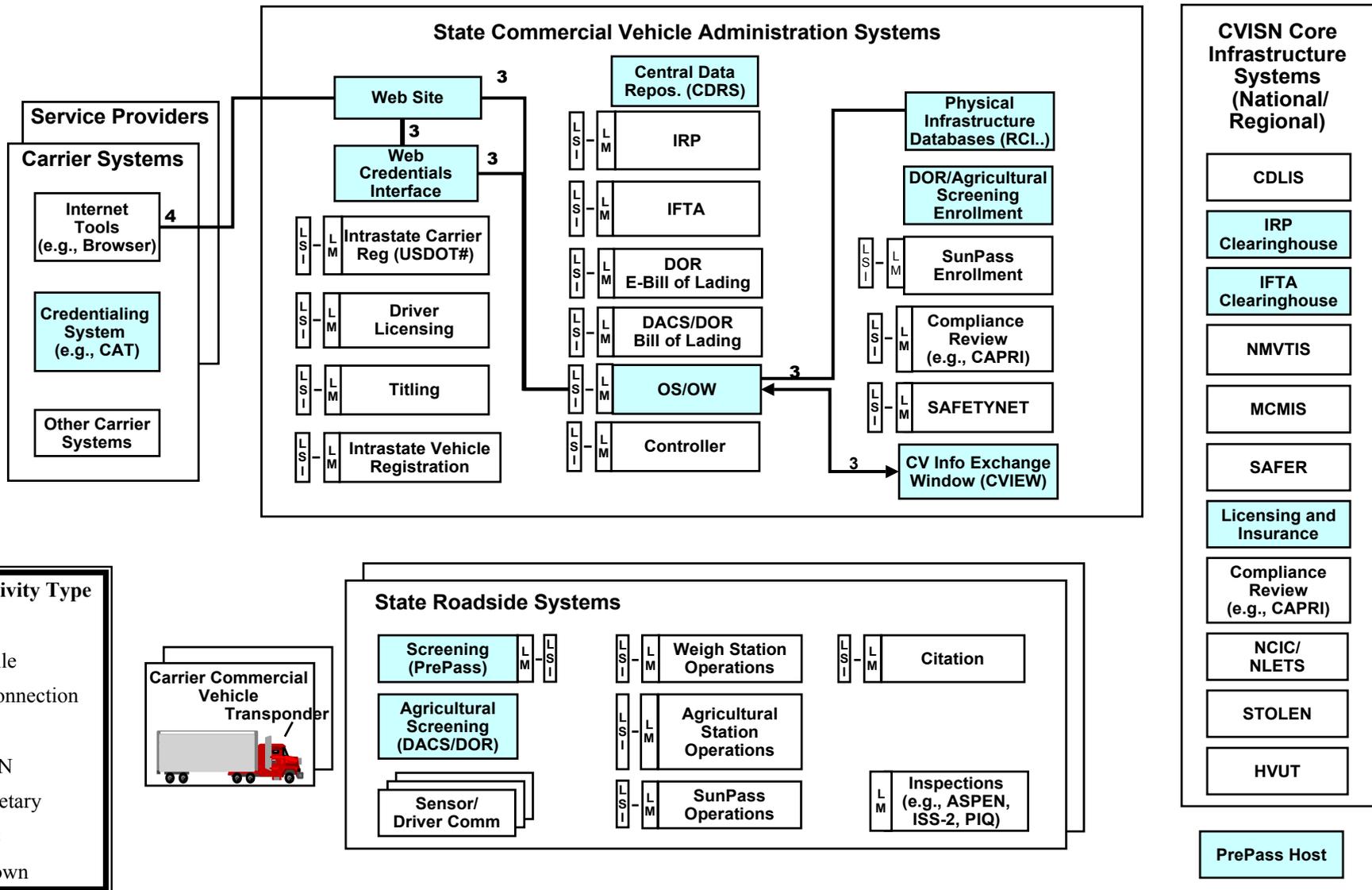
Oversize/Overweight Permitting Operational Scenarios



Step A occurs periodically

- A. OS/OW permitting system will be updated nightly by the physical infrastructure databases (Roadway Mapping/RCI, PONTIS, and manual impediment) to ensure that the routing module is up-to-date.**

Oversize/Overweight Permitting: System Interfaces



Oversize/Overweight Permitting: Modifications Required to Existing Systems



- **Link from Roadway Mapping/RCI and PONTIS to the OS/OW (route review) system.**
- **Incorporate Roadway Mapping/RCI and PONTIS into routing decision.**

Oversize/Overweight Permitting: Functions to be Performed by New Systems



- **Web server to host and screen application.**
- **Routing review system to approve routes (within certain threshold)--weight, height, length, width, inner-bridge, etc.**
- **Manually introduced impediment database will allow temporary restrictions (construction data, emergency situations, road closures, special events, detours, etc.) to be included in the routing review process.**
- **Electronic Payment System--to be developed CVISN-wide.**

Oversize/Overweight Permitting: Top-Level Physical Design



Allocation of Functions to Computers

System:

“MyFlorida.com”

Web Server

Roadway Mapping/RCI

PONTIS

Manual Impediment Database

OS/OW System

CVISN Electronic Payment System

Function:

Entry Portal

Host On-line Application
and Screen Applications

Roadway Characteristics Inventory

Bridge inventory and information

Construction, Emergency, Special
Event Data, Etc.

Review routes, approve and issue
permits, generate approved routes,
send permit information to CVIEW

Payment for permits

Oversize/Overweight Permitting: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
“MyFlorida.com”	Establish link	L	4
Roadway Mapping/RCI	Upgrade and link to permit system	H	10
PONTIS	Link to permit system	M	9
Manual Impediment Database	Build new	M	10
OS/OW System	Build new	H	4-5

Oversize/Overweight Permitting: Issues



- **Who will modify Roadway Mapping/RCI database and when will this occur.**
- **Specifications for Web Server.**
- **Modifications to OS/OW system may require new LAN Server.**
- **Web based Permitting system must begin development soon.**

Oversize/Overweight Permitting: Procurement Needs



PROCUREMENT ITEM	WHAT	CATEGORY	FUNDING SOURCE	TECHNICAL LEAD FOR REQTS	POTENTIAL VENDORS
Web Server			DOT	K. Hutchison	
Web Application			DOT	K. Hutchison	
Server Software			DOT	K. Hutchison	
Network Infrastructure			DOT	K. Hutchison	
OS/OW Automated Routing System			DOT	K. Hutchison	
OS/OW Permit System			DOT	K. Hutchison	
Manual Impediment Database and Application			DOT	K. Hutchison	
Manual Impediment Database Interface			DOT	K. Hutchison	
Roadway Mapping Database and Application			DOT	K. Hutchison	
Roadway Mapping Database Interface			DOT	K. Hutchison	
PONTIS Interface			DOT	K. Hutchison	



**Florida CVISN
Top-Level Design:
Safety Information Exchange
Program Area**



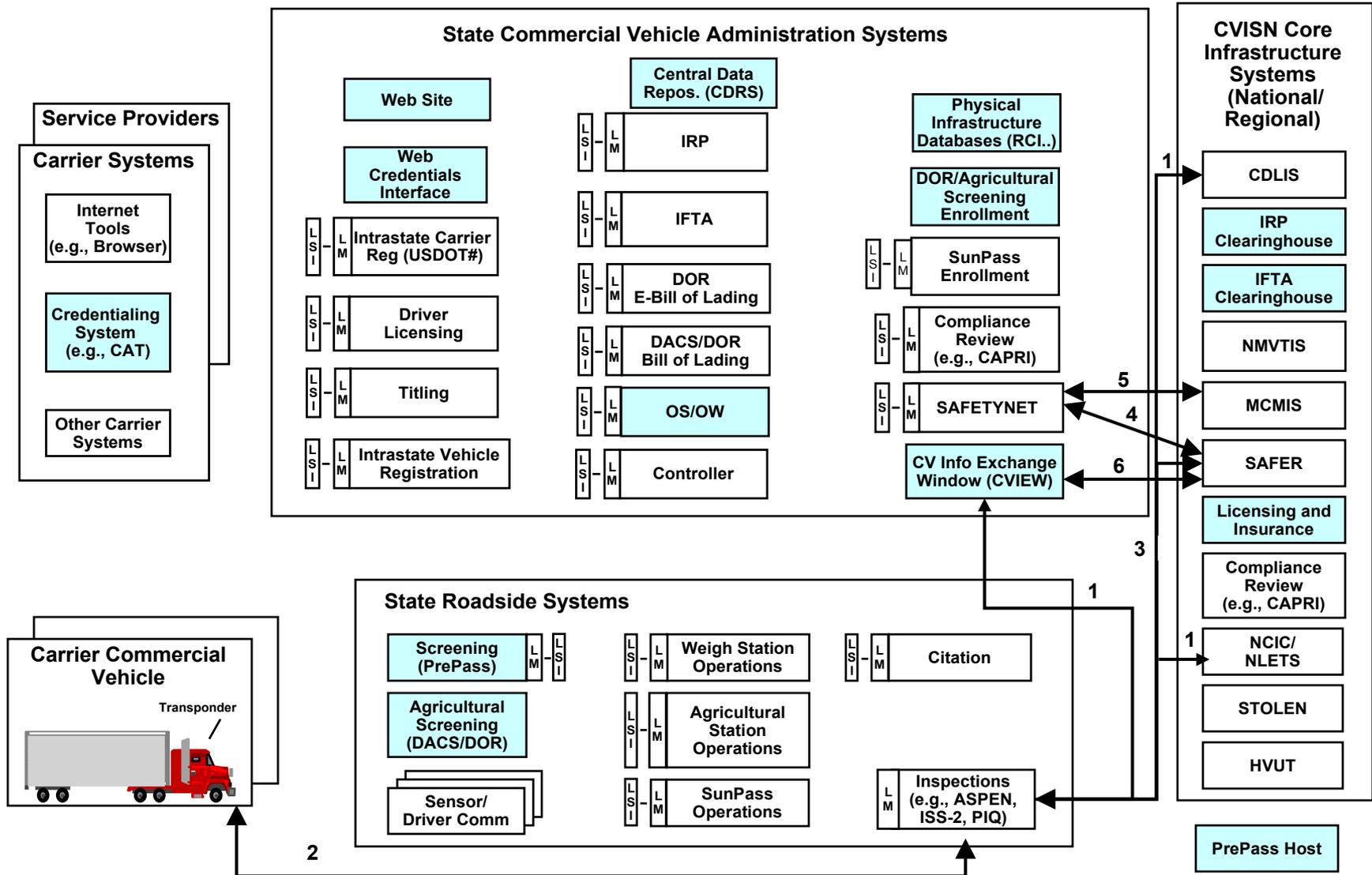
Florida CVISN Top-Level Design: Roadside Inspections (ASPEN)

Roadside Inspections (ASPEN): Operational Scenario



- Electronically record and transmit roadside safety inspections to SAFER and MCMIS.
- Query databases for CDL, credential, and vehicle data.

Roadside Inspections (ASPEN): Functional Thread Diagram

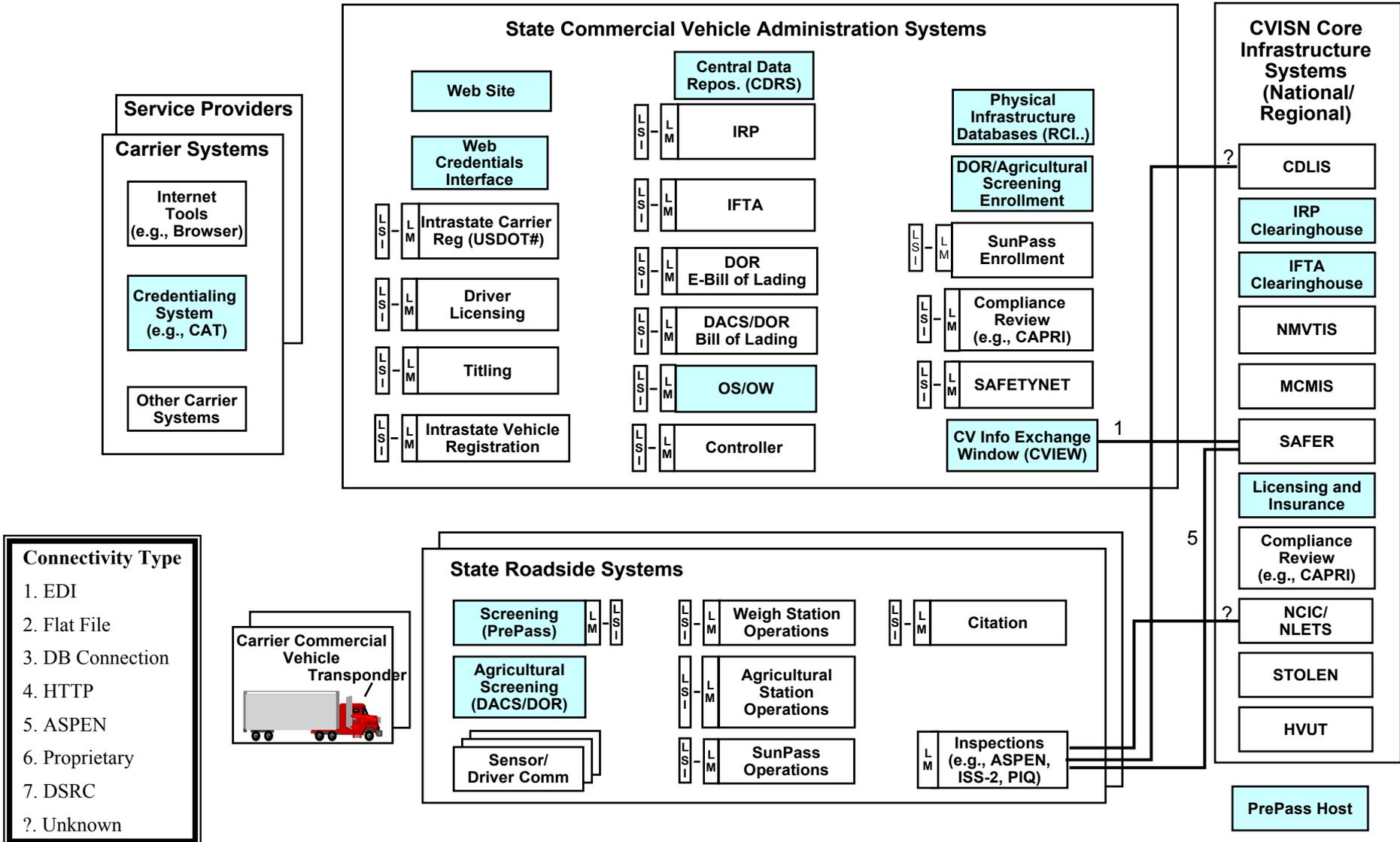


Roadside Inspections (ASPEN): Operational Scenario



- 1. Inspector queries CDLIS, NCIC and CVIEW for CDL, stolen vehicle and credentials information.**
- 2. Vehicle is inspected at roadside using ASPEN Software.**
- 3. Inspection is electronically transmitted to SAFER via CDPD.**
- 4. SAFER transmits inspection to SAFETYNET.**
- 5. SAFETYNET transmits inspection to MCMIS.**
- 6. SAFER transmits inspection to CVIEW.**

Roadside Inspections (ASPEN): System Interfaces



Roadside Inspections (ASPEN): Modifications Required to Existing Systems



- **Aspen 2.0 will be deployed by August 2001.**
- **Transition to SAFETynet 2000.**
- **Complete installation of CDPD for SAFER Connectivity.**
 - Land-lines will be used where CDPD is unavailable.

Roadside Inspections (ASPEN): Functions to be Performed by New Systems



- **CVIEW receives and stores data from State and Federal sources and then makes them available to inspectors at the roadside.**

Roadside Inspections (ASPEN): Top-Level Physical Design



Allocation of Functions to Computers

System:

Roadside laptop

CVIEW

Function:

Capture vehicle
inspection data
Aspen

Serves as statewide
repository for credential
data. May be queried by
roadside inspectors

Roadside Inspections (ASPEN): Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
Deploy ASPEN 2.0	Upgrade Software	L	1
SAFETYNET 2000	Upgrade Software	L	2*
CDPD Connectivity	Complete Deployment	H	5

** Currently planned to be completed ahead of schedule*

Roadside Inspections (ASPEN): Issues



- **Are inspections sent directly to SAFER or are they sent to CVIEW and then to SAFER?**
- **Completion of statewide CDPD accessibility is hampered by incomplete infrastructure.**

Roadside Inspections (ASPEN): Procurement Needs



- **None at this time.**
- **Future procurement needs will be dictated by the implementation strategy to complete statewide CDPD deployment.**



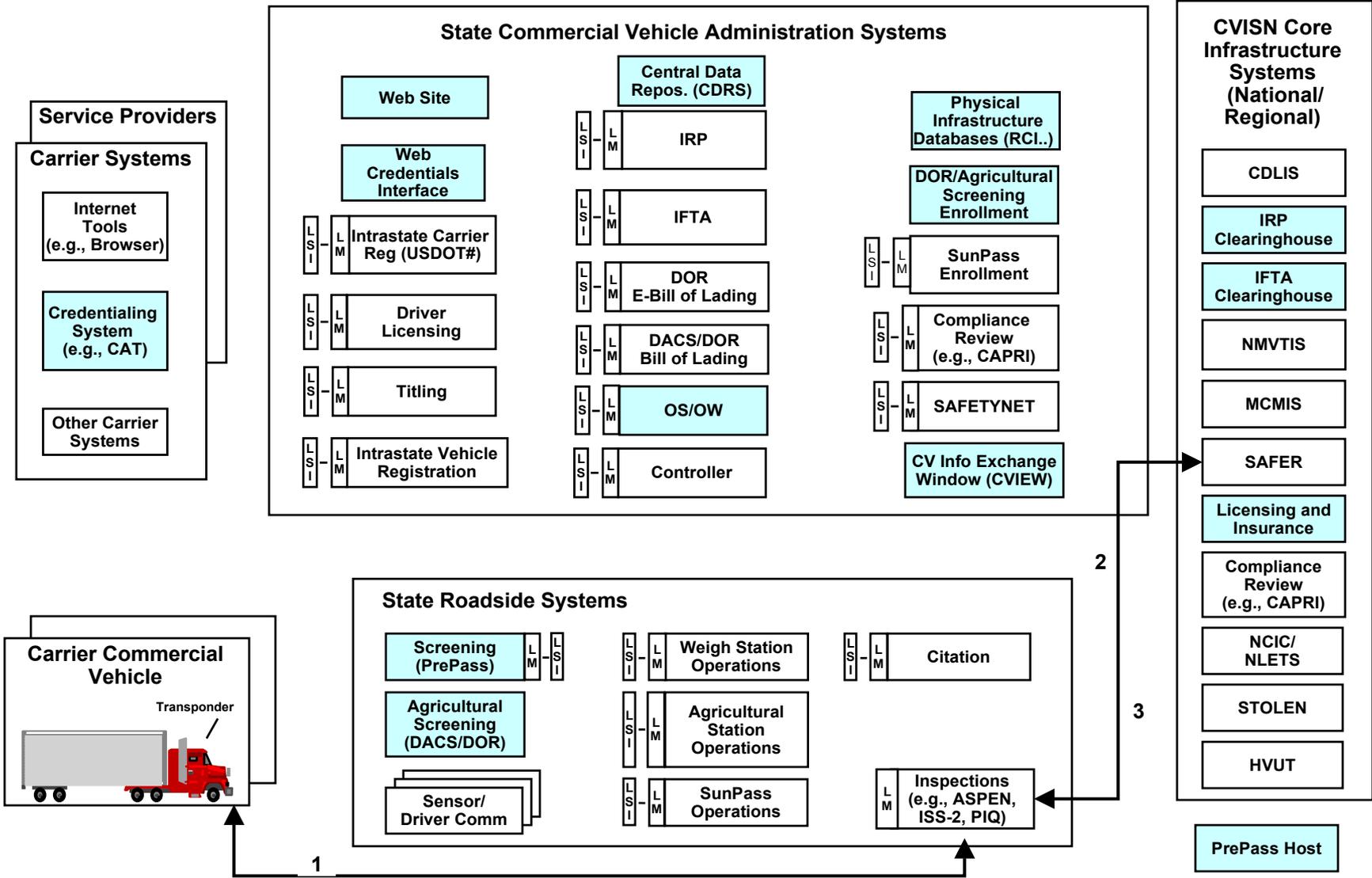
**Florida CVISN
Top-Level Design:
Previous Inspection Query (ASPEN)**

Previous Inspection Query (ASPEN): Operational Scenario



- **Electronically query for previous inspection reports from the roadside.**
 - Using CDPD from Roadside to connect with SAFER (Dial-up may be used where CDPD is unavailable)
 - Query for past inspections
 - Information returned to roadside from SAFER

Previous Inspection Query (ASPEN): Functional Thread Diagram

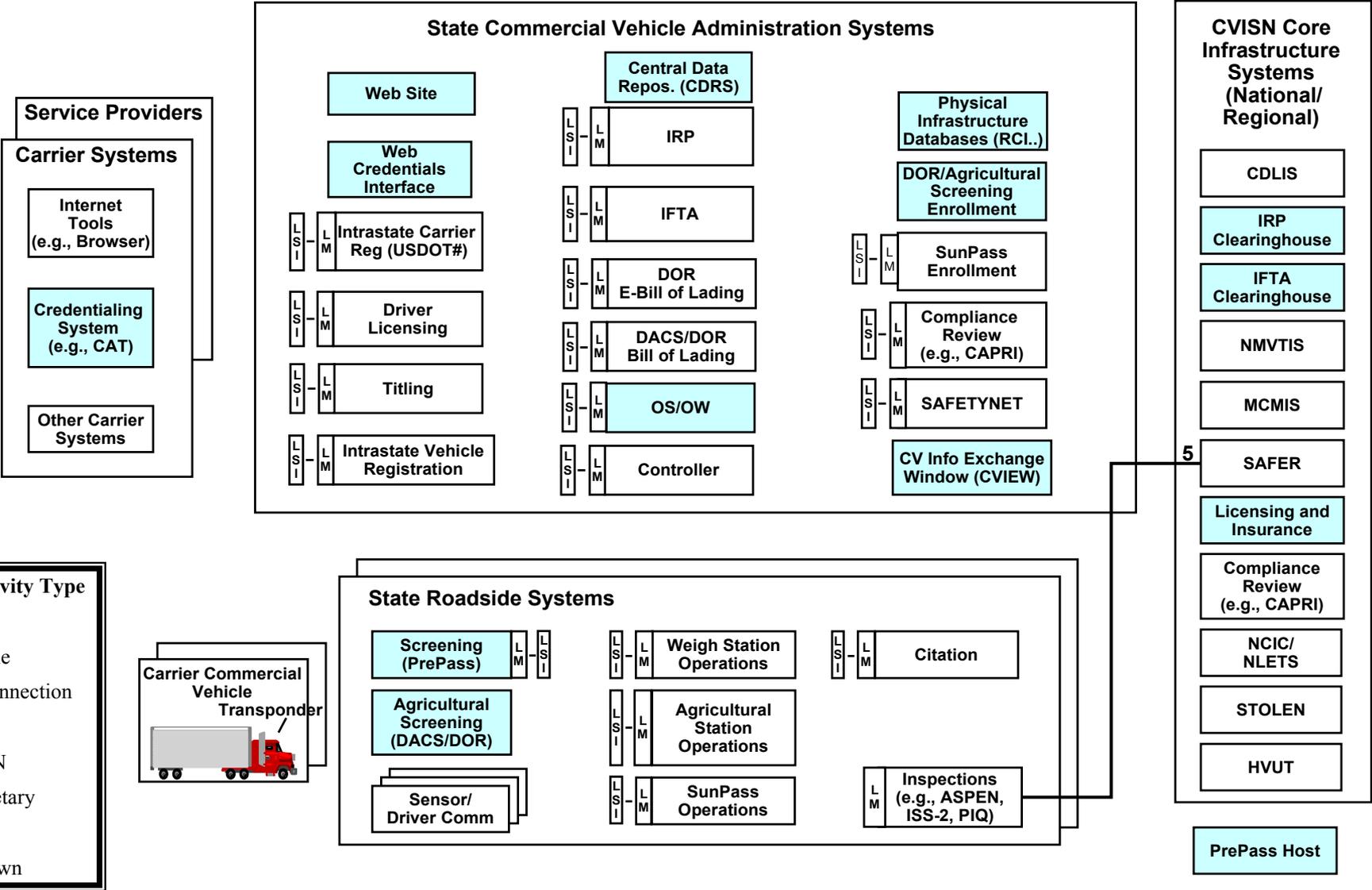


Previous Inspection Query (ASPEN): Operational Scenario



- 1. Vehicle is inspected at roadside using ASPEN Software.**
- 2. SAFER is queried for past vehicle inspections via CDPD or dial-up in areas where CDPD is unavailable.**
- 3. SAFER transmits past vehicle inspection information back to ASPEN via CDPD or dial-up.**

Previous Inspection Query (ASPEN): System Interface



Previous Inspection Query (ASPEN): Modifications Required to Existing Systems



- **Upgrade ASPEN Software 2.0 (completed by August 2000).**
- **Complete installation of CDPD for SAFER Connectivity.**

Previous Inspection Query (ASPEN): Functions to be Performed by New Systems



- None

Previous Inspection Query (ASPEN): Top-Level Physical Design



Allocation of Functions to Computers

System:

Roadside laptop

Function:

ASPEN Inspection/PIQ

Previous Inspection Query (ASPEN): Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
Deploy ASPEN 2.0	Upgrade Software	L	2
CDPD Connectivity	Complete Deployment	H	5

Previous Inspection Query (ASPEN): Issues



- **Will PIQ continued to be queried through SAFER or will it now be queried through CVIEW?**
- **Completion of statewide CDPD accessibility is hampered by incomplete infrastructure.**

Previous Inspection Query (ASPEN): Procurement Needs



- **None at this time.**
- **Future procurement needs will be dictated by the implementation strategy to complete statewide CDPD deployment.**



Florida CVISN Top-Level Design: Electronic Screening Program Area



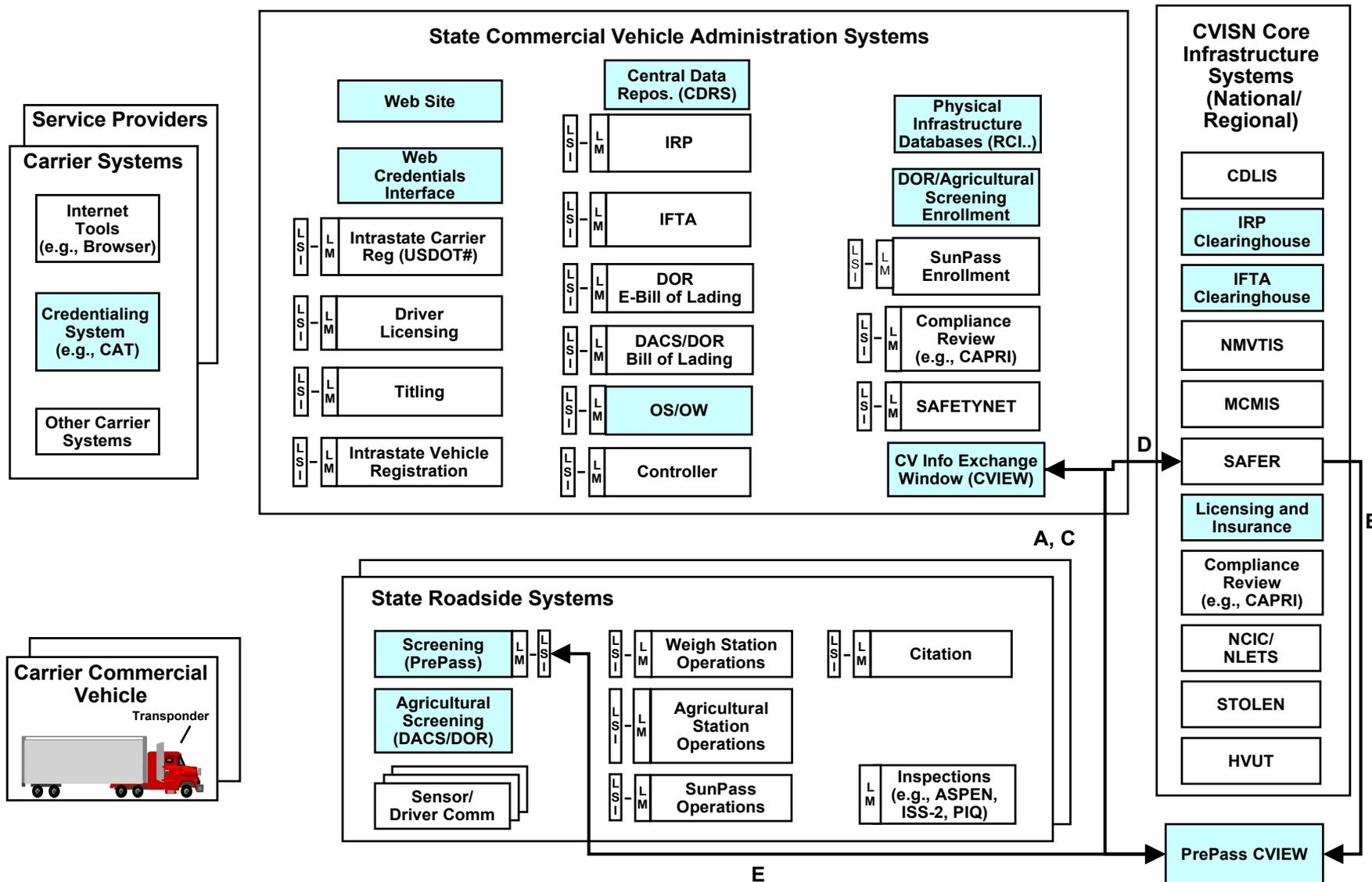
**Florida CVISN
Top-Level Design:
Data Verification to Support Enrollment
in Mainline Electronic Screening Program**

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Operational Scenario



Query data stored in Florida CVIEW and SAFER to support the enrollment of Florida carriers in the mainline electronic screening program.

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Functional Thread Diagram



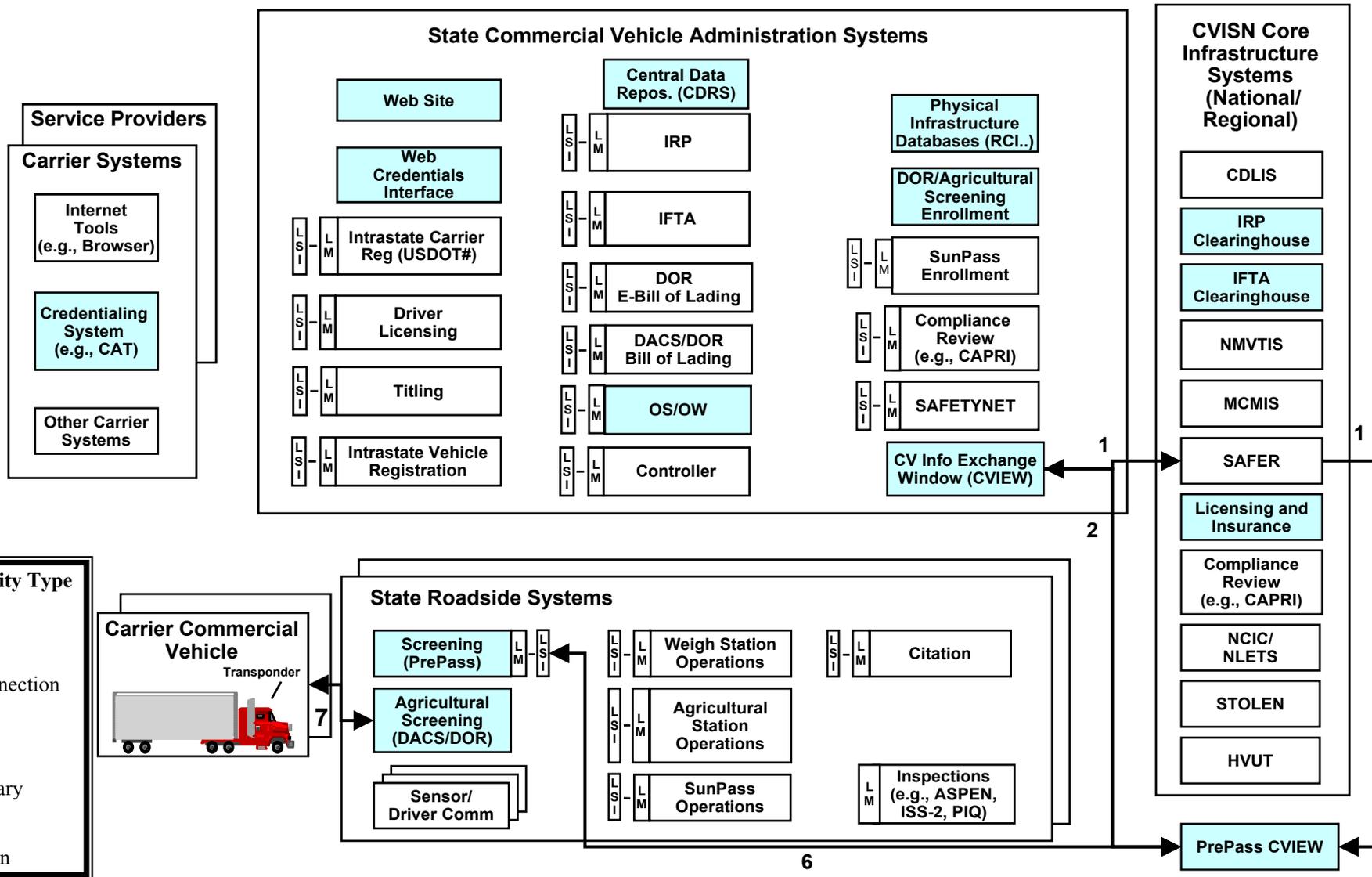
Data Verification to Support Enrollment in Mainline Electronic Screening Program: Operational Scenario



A - C are steps that occur ~ periodically

- A. Upon carrier enrollment in PrePass, the PrePass CVIEW will query the State CVIEW for carrier and vehicle snapshots. The carrier will be allowed or denied eligibility based on state criteria, which has been established.**
- B. SAFER sends subscription updates to the PrePass CVIEW for interstate carrier and vehicle snapshots.**
- C. The State CVIEW sends the PrePass CVIEW updates for intrastate and interstate carrier and vehicle snapshots.**
- D. The State CVIEW sends credentialing and safety information to SAFER for interstate carriers.**
- E. The PrePass CVIEW sends updates to the weigh station computers for e-clearance authorization.**

Data Verification to Support Enrollment in Mainline Electronic Screening Program: System Interfaces



Data Verification to Support Enrollment in Mainline Electronic Screening Program: Modifications Required to Existing Systems



- None

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Functions to be Performed by New Systems



- **State CVIEW**

- Allow State CVIEW query by PrePass for new enrollments, verifications (if allowed).
- Send carrier/vehicle event status updates to PrePass CVIEW for enrolled carriers.

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Top-Level Physical Design



Allocation of Functions to Computers

System:

Function:

PrePass CVIEW/Host

Coordinates the collection of carrier and vehicle data from FL CVIEW and SAFER; makes the screening decision based on FL criteria (i.e. USDOT number, Vehicle Registration, Paid Fuel taxes, etc.)

Roadside Computer

Stores the screening decision

CVIEW/SAFER

Provides vehicle and carrier data to PrePass CVIEW to support enrollment/screening decision

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
PrePass CVIEW Access	Set-up delivery of carrier and vehicle data from FL CVIEW to PrePass CVIEW	M	4

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Issues



- **CVIEW access**
- **Origin of data to be shared with PrePass—What types of data will be sent from CVIEW, what types of data will be sent from SAFER.**

Data Verification to Support Enrollment in Mainline Electronic Screening Program: Procurement Needs



- **See CVIEW Connectivity to Systems Outside Florida**



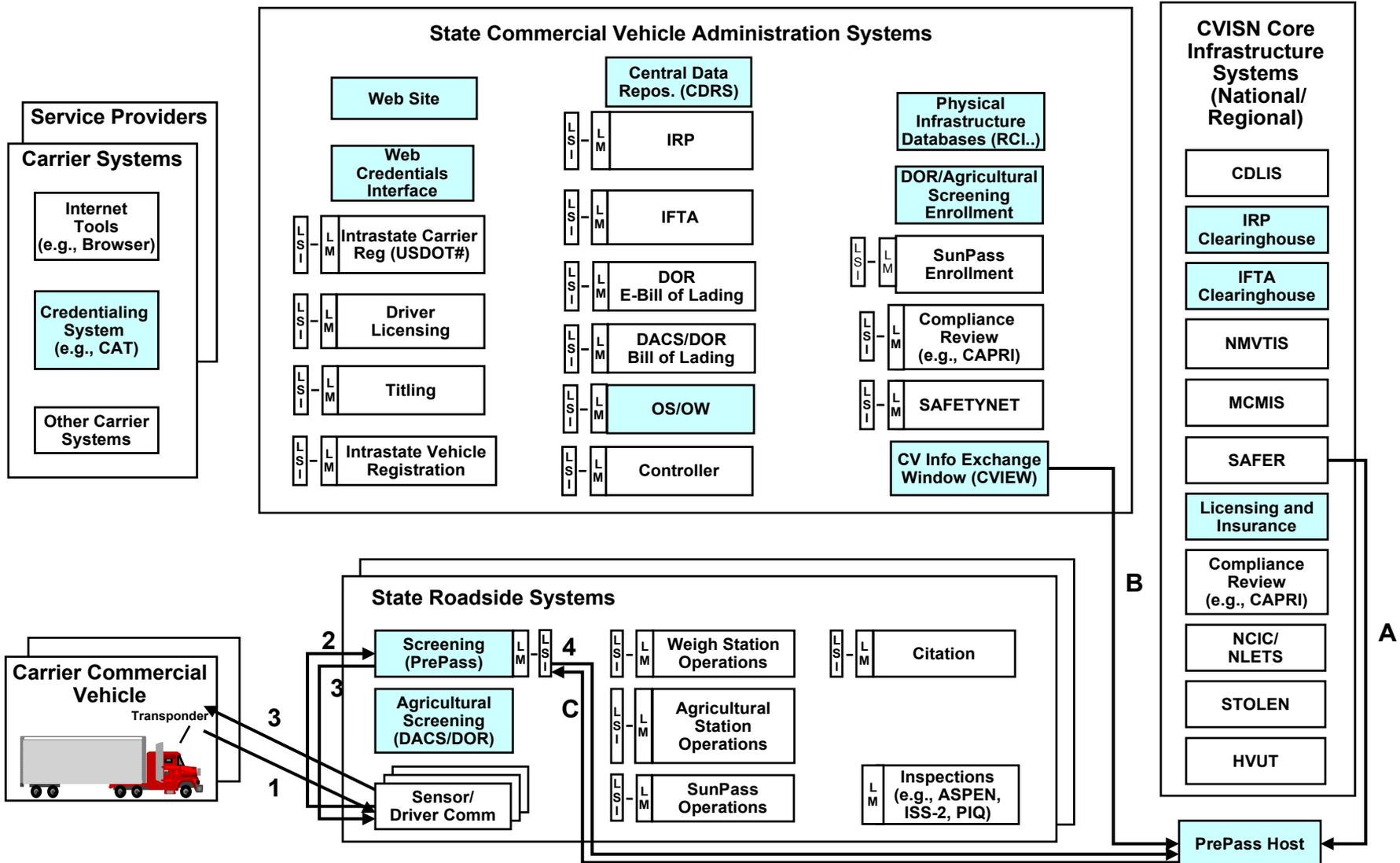
Florida CVISN Top-Level Design: Mainline Electronic Screening

Mainline Electronic Screening: Operational Scenario



Electronically screen and bypass vehicles of enrolled carriers past fixed inspection stations.

Mainline Electronic Screening: Functional Thread Diagram



Mainline Electronic Screening: Operational Scenario



1 - 4 are steps that occur in real time for each vehicle

- 1. Transponder ID is transmitted from the DSRC transponder on board the Commercial Vehicle to the Sensor/Driver Communications interface using ASTM version 6 and IEEE Std 1455-1999 CMV Screening Identification message.**
- 2. IDs are sent to screening computer resident at scale house. IDs are correlated with carrier and vehicle snapshot data. The screening decision is retrieved and random “pull-in” is calculated.**
- 3. The screening decision is communicated back to the driver, again using the ASTM version 6 standards and the IEEE Std 1455-1999 message set.**
- 4. Screening information is communicated back to the PrePass host computer for billing purposes.**

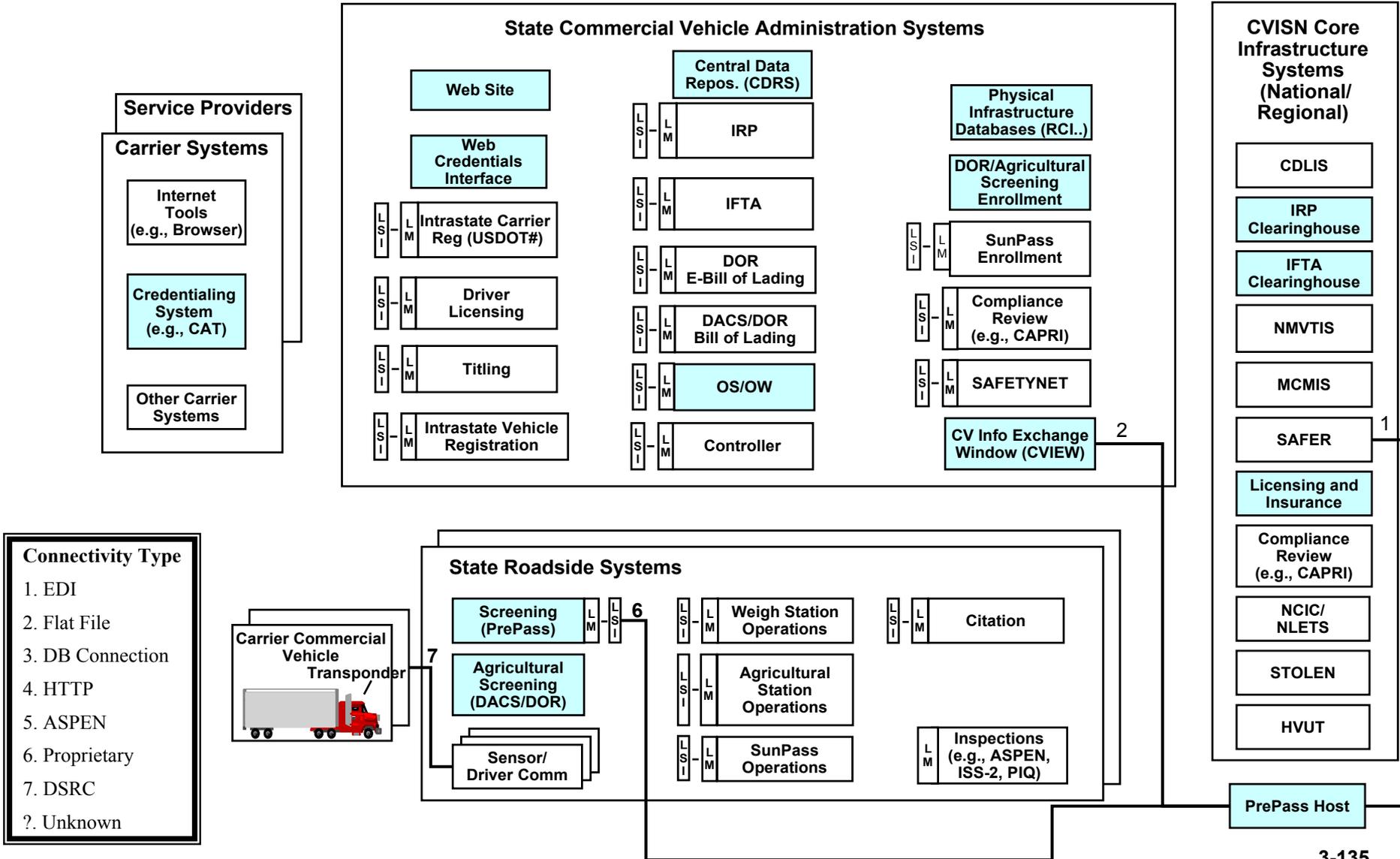
Mainline Electronic Screening: Operational Scenario



A-C are functions that are performed periodically

- A. Subscription-based snapshot updates from SAFER to PrePass CVIEW/Host.**
- B. Subscription-based updates from Florida CVIEW to PrePass CVIEW/Host (if allowed).**
- C. Nightly update of the roadside screening computer from the PrePass CVIEW/Host.**

Mainline Electronic Screening: System Interfaces



Mainline Electronic Screening: Modifications Required to Existing Systems



- None

Mainline Electronic Screening: Functions to be Performed by New Systems



- None

Mainline Electronic Screening: Top-Level Physical Design



Allocation of Functions to Computers

System:

PrePass CVIEW/Host

Roadside Computer

Transponder

Function:

Calculate screening decision and transmit it to roadside screening computer

Store screening decision for transmission to transponder; Calculate random “pull-in”

Store and transmit identifier; Receive and display the screening decision

Mainline Electronic Screening: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
Screening—Build 1	Deploy PrePass at 10 sites	L	1
Screening—Build 2	Deploy PrePass at a total of 17 sites	L	3
Screening—Build 3	Deploy PrePass at a total of 19 sites	L	4
Screening—Build 4	Dynamically screen vehicles electronically using carrier and vehicle snapshots using CVIEW	L	5

Mainline Electronic Screening: Issues



- **Not screening using mainline WIM today.**
 - May add this capability long-term
- **Implementation of intrastate snapshot capability (Build 4) depends on CVIEW implementation schedule rather than on technology.**
- **Must decide if PrePass will have access to CVIEW.**
- **Must determine which data will be provided to PrePass through CVIEW and which data will be provided from other sources.**
- **Need to develop weight violation algorithm.**
- **Possibility of future mobile pre-screening.**

Mainline Electronic Screening: Procurement Needs



- **Procurement has been completed for PrePass.**
- **CVIEW procurement will be handled through separate project.**
- **No additional procurement envisioned for full electronic screening capability.**



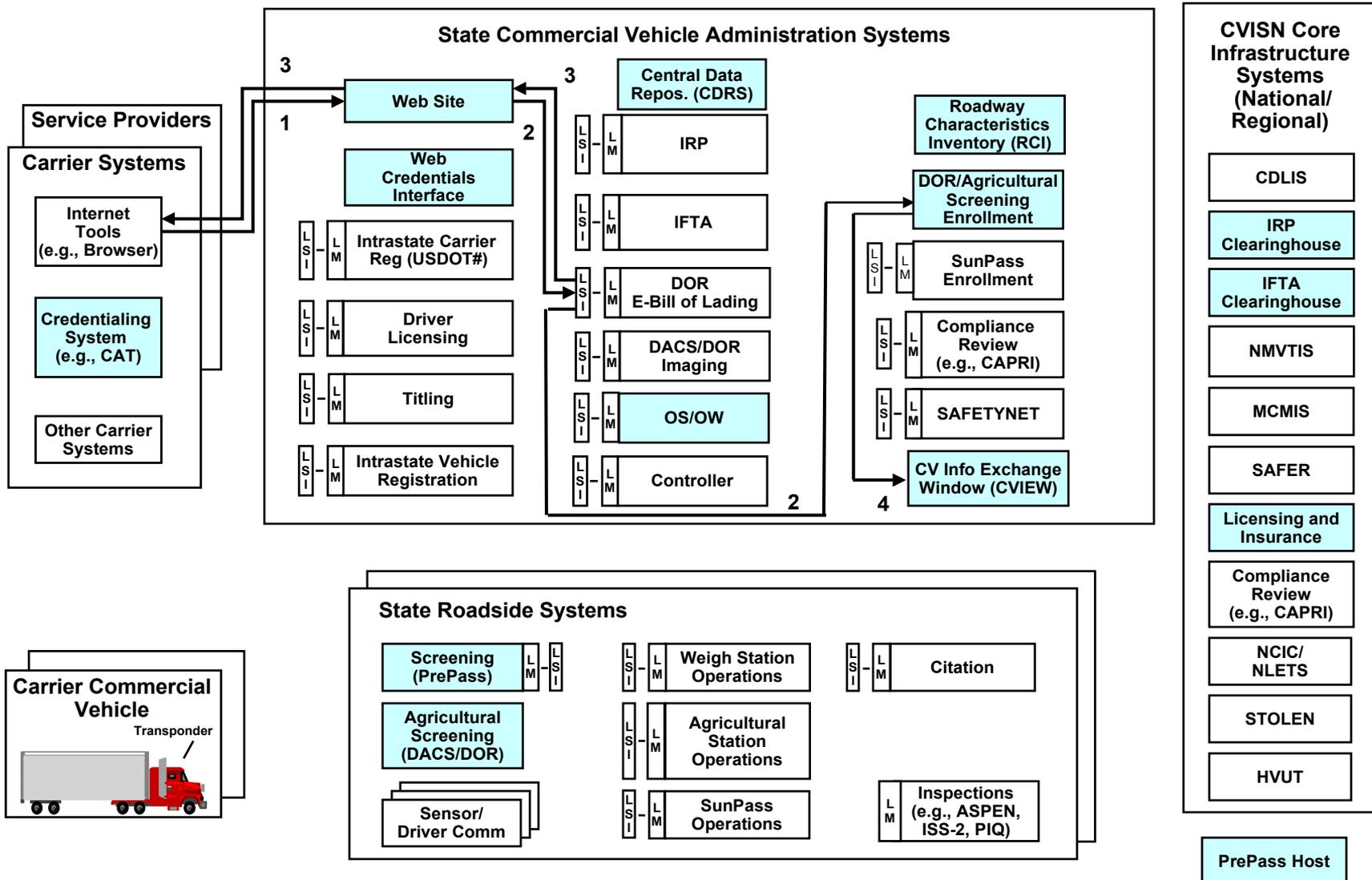
**Florida CVISN
Top-Level Design:
Enrollment in Agricultural/Bills of Lading
Electronic Screening Program**

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Operational Scenario



- **Allow carriers to enroll in the Agriculture/Bills of Lading electronic screening program via the Web.**

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Functional Thread Diagram

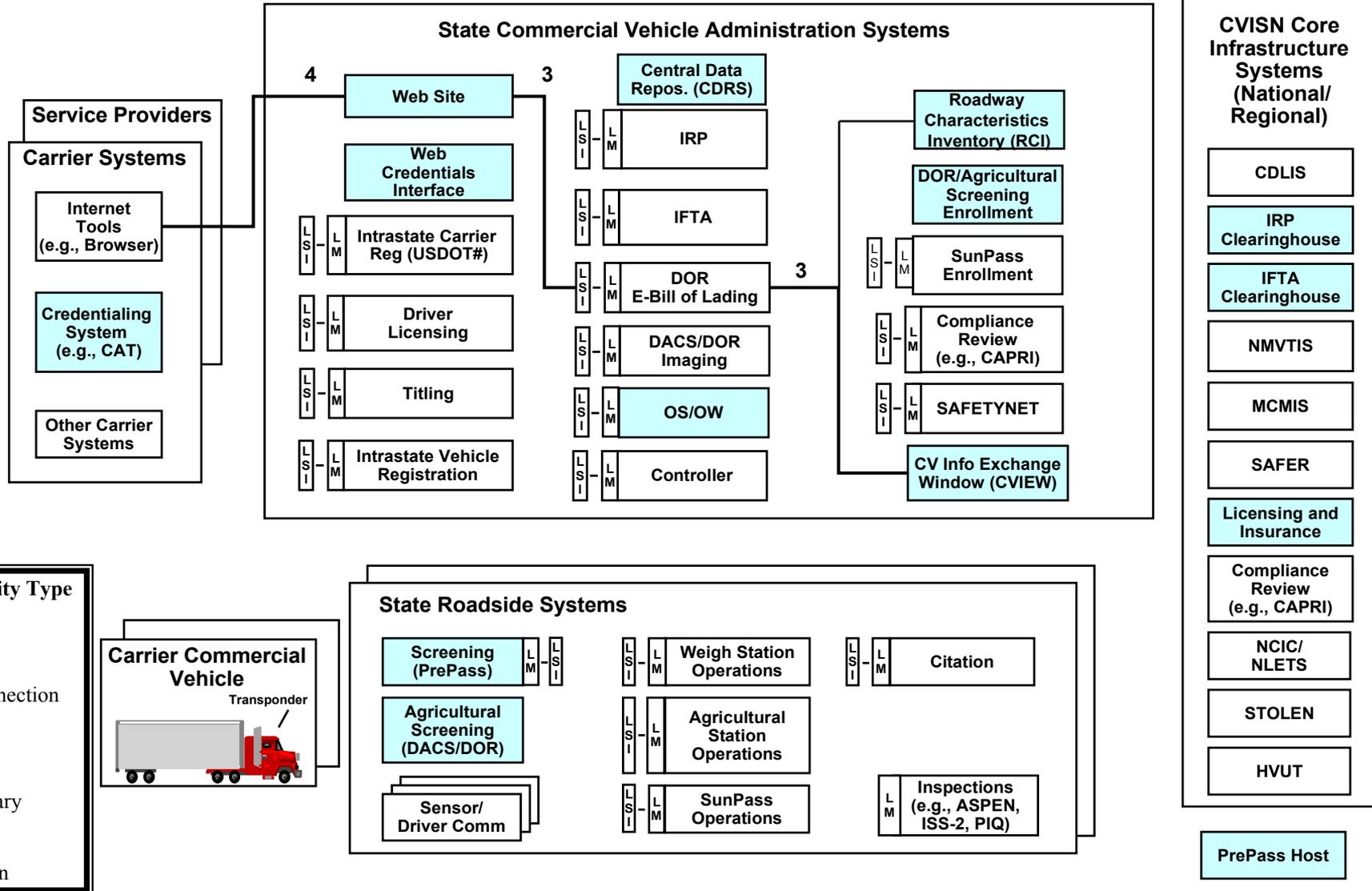


Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Operational Scenario



- 1. Carrier applies for enrollment through its Web browser to a secure Florida Web site, likely “MyFlorida.com.”**
- 2. DOR/DACS staff receives application from Web site, reviews application and makes an enrollment decision.**
 - Carrier must be approved by both DOR and DACS to be enrolled in electronic screening program. Applications will be reviewed by DOR first and if it approves a carrier’s enrollment or a carrier is not required to provide bills of lading, the application is forwarded to DACS staff for review and approval.
- 3. DOR or DACS notifies the carrier of the enrollment decision via the Web site, e-mail, or letter. (DOR will return decision only if they reject a carrier).**
- 4. DOR/DACS electronic screening database updates carrier’s snapshot in CVIEW to indicate the carrier’s enrollment status.**

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: System Interfaces



Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Modifications Required to Existing Systems



- None

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Functions to be Performed by New Systems



- **On-line application for enrollment.**
- **Link to “MyFlorida.com.”**
- **Record enrollment decisions and upload decisions to CVIEW.**

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Top-Level Physical Design



Allocation of Functions to Computers

<u>System:</u>	<u>Function:</u>
"MyFlorida.com" server	E-mail link
TBD	On-line application
DACS Server	Front and back end enrollment via web application. Record enrollment decisions.
DOR Server	Front and back end enrollment via web application. Record enrollment decisions.

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
Presence on "MyFlorida.com"	Connectivity	L	8
Development of on-line application	Build new	H	8
Development of enrollment database	Build new	H	8

Enrollment in Agricultural/ Bills of Lading Electronic Screening Program: Issues



- **Develop and advertise manual enrollment process, which would be replaced by automated system later.**
- **Develop a MOU with carriers to certify that their shipments typically do not involve agricultural products.**
- **Review administrative rules to allow for suspension or revocation of program privileges.**
- **Interface with U.S. Customs Service and USDA to identify animal and food products shipped into Florida via airport or water port.**
- **Develop “after-the-fact” tracking capability of international shipments.**
 - Allow DACS to track where a potentially contaminated shipment went, for example foot and mouth, food products and farm equipment.



**Florida CVISN
Top-level Design:
Agricultural/Bills of Lading
Electronic Screening Program**

Agricultural/Bills of Lading Electronic Screening Program: Operational Scenario



- **Agricultural inspections**

- All trucks must stop at DACS agricultural stations for inspection to ensure compliance with public health regulations
 - All trucks must stop, including those not carrying agricultural products

Agricultural/Bills of Lading Electronic Screening Program: Operational Scenario



- **Use tax enforcement**

- DACS personnel collect bills of lading from trucks and forward to DOR to verify use tax compliance.
 - Bills of lading are scanned at the DACS station, electronically transferred to an oracle station at DACS central office, then electronically transmitted to DOR central office for distribution to DOR service centers
 - All bills of lading images are transmitted via dedicated network to protect proprietary business information
- DOR has initiated a pilot program for carriers to submit bills of lading electronically.
 - Data is received on disk, tape, or other storage media and manipulated by DOR staff for tax purposes
 - DACS officers are informed in writing if a carrier has qualified for this program
 - DOR staff would like to increase participation in this program to streamline data collection and automated processing for use tax recoveries

Agricultural/ Bills of Lading Electronic Screening Program: Operational Scenario



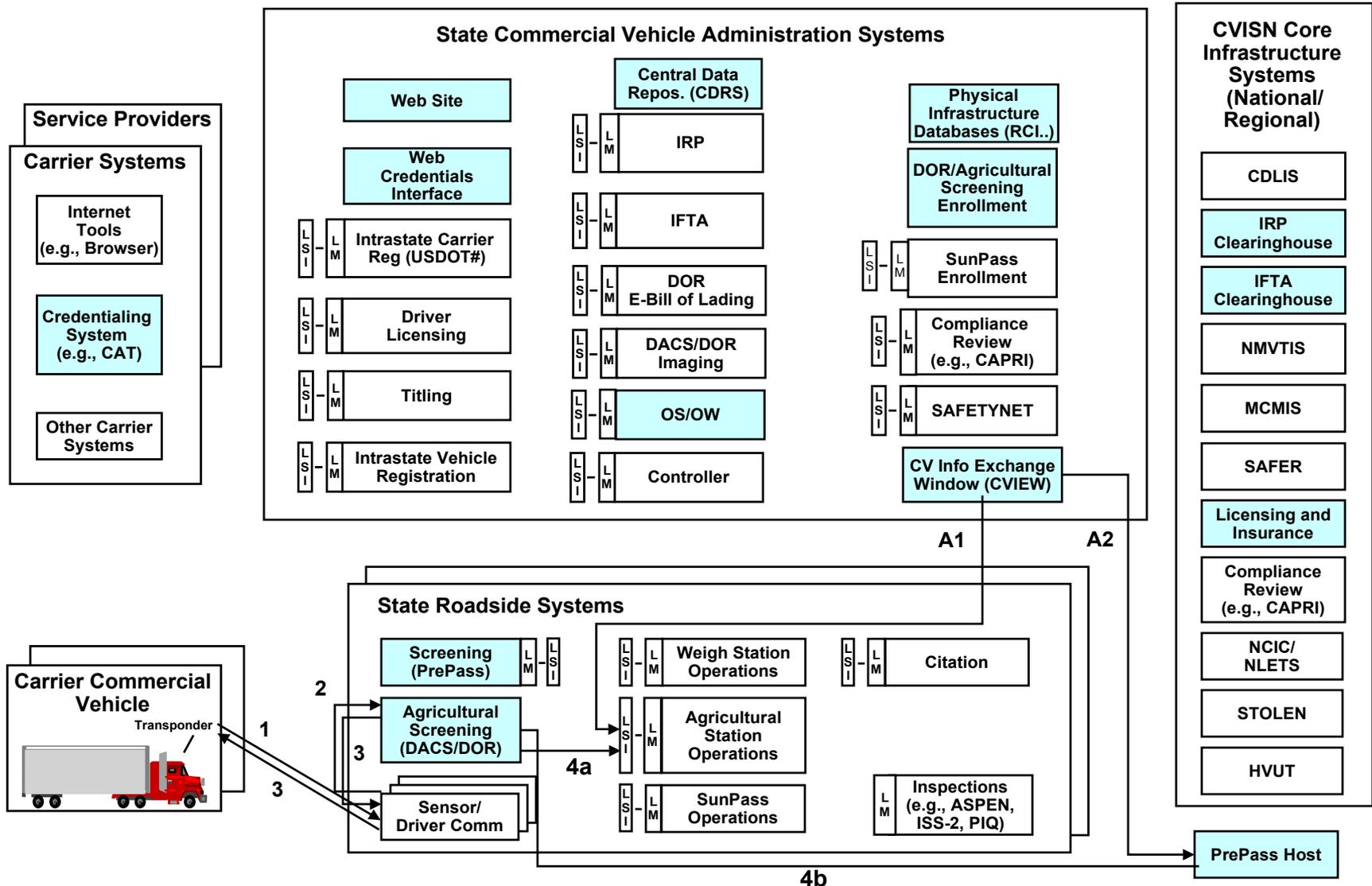
- **Enroll in DOR electronic bills of lading program followed by enrollment in the agricultural inspection pre-clearance program.**
 - DACS agricultural inspection pre-clearance program enrollment criteria includes:
 - Applicant must operate only vehicles specifically exempted by administrative rule or be a recognized truck line regularly utilizing five or more trucks engaged primarily in the transportation of commodities other than those over which DACS exercises regulatory authority
 - Applicant must have established terminals and/or drop sites in Florida
 - Applicant agrees to make cargoes and regular manifest and/or other billing on truck shipments available to any DACS representative at all Florida terminals or drop sites any time during hours of operation
 - Applicant agrees that every truck shipment which includes agricultural, horticultural, aquaculture, livestock or other commodities over which DACS agricultural inspection stations exercises regulatory authority will voluntarily stop at all agricultural inspection stations and declare such commodities even though pre-clearance approval is received

Agricultural/ Bills of Lading Electronic Screening Program: Operational Scenario



- The privilege of participating in the agricultural inspection pre-clearance program may be revoked for any of the following causes:
 - Routine or regular transportation of agricultural, horticultural, aquaculture, livestock or other commodities over which DACS exercises regulatory authority
 - Cancellation of terminal and/or drop site operations in Florida
 - Failure to make cargoes and regular manifest or other billing on truck shipments available for inspection by DACS representatives at Florida terminals and drop sites during hours of operation
 - Failure of any truck shipment which includes agricultural, horticultural, aquaculture, livestock or other commodities, over which DACS exercises regulatory authority, to voluntarily stop at any agricultural inspection station and declare such commodities, even though pre-clearance approval is received
- By-pass enrolled and screened carriers past agricultural inspection stations, for both roadside agriculture inspections and bills of lading program.

Agricultural/ Bills of Lading Electronic Screening Program: Functional Thread Diagram



Agricultural/ Bills of Lading Electronic Screening Program: Operational Scenario



1 - 4 are steps that occur in real time for each vehicle

- 1. Transponder id is transmitted from the DSRC transponder on board the commercial vehicle to the sensor/driver communications interface using astm version 6 and ieee std 1455-1999 cmv screening identification message.**
- 2. Ids are sent to agricultural screening computer resident at the station. Ids are correlated with enrollment decisions. A screening decision is made.**
- 3. The screening decision is communicated back to the driver, again using the astm version 6 standards and the ieee std 1455-1999 message set.**
- 4a. Screening information is communicated back to the agricultural station operations computer for record-keeping purposes (if done by Florida).**
- 4b. Screening information (e.g. Number of bypassed vehicles/site) is communicated back to the agricultural staff via monthly reports from PrePass (if done by PrePass.)**

Agricultural/ Bills of Lading Electronic Screening Program: Operational Scenario



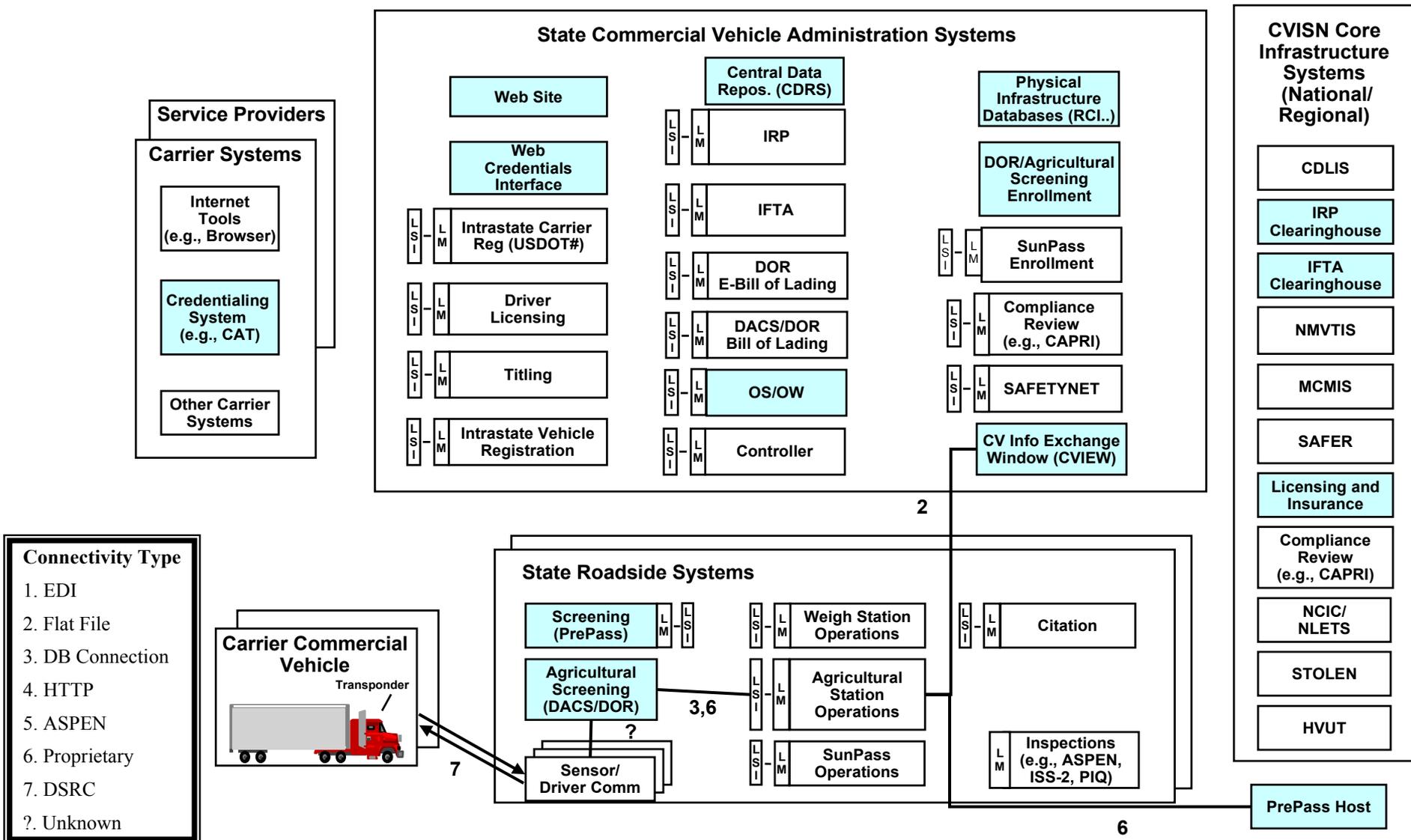
A - B are steps that occur ~ daily for each site (note: actual update frequency and data transfer format will depend on the implementation solution for CVIEW and the agricultural screening system as well as the network bandwidth available to each site)

A1. CVIEW sends enrollment updates to the DACS site computer for interstate and intrastate carriers. This includes the status of each carrier in the DOR / DACS electronic screening program.

A2. CVIEW sends enrollment updates to the PrePass host computer for interstate and intrastate carriers. This includes the status of each carrier in the DOR / DACS electronic screening program.

*** DOR / DACS are still awaiting information from the vendor concerning who will supply the necessary hardware and software to operate these systems. Neither state agency has funds available or projected to be available for this project.**

Agricultural/ Bills of Lading Electronic Screening Program: System Interfaces



Agricultural/ Bills of Lading Electronic Screening Program: Modifications Required to Existing Systems



- **Out-of-agency funding will be required to upgrade data connection to T-1 or preferably fiber optics.**

Agricultural/ Bills of Lading Electronic Screening Program: Functions to Be Performed by New Systems



- **CVIEW stores enrollment status of each carrier and transmits updates to either PrePass or the agriculture station operations center.**
- **Vehicles will be identified, screened and bypassed based on criteria established by DOR and DACS.**
 - An application would be developed for DOR and OALE. Carriers would retrieve the application from MyFlorida.com, or by e-mail. Applicants must have terminals and/or drop sites in Florida. Applicants agree to make cargoes and regular manifest available to OALE. Applicants agree to submit BoLs to DOR. Carriers rarely, if ever, transport Ag products, and if they are they agree to pull into Ag stations. Once they submit the application and DOR approves it will come to OALE for approval. There should be no conflict of signals.
- **Screening events will be recorded for reporting purposes.**

Agricultural/ Bills of Lading Electronic Screening Program: Top-level Physical Design



Allocation of Functions to Computers

System:

DACS server

Agriculture screening
At inspection sites

DOR server

Transponder

Function:

Connect to CVIEW

Screen vehicles

Connect to DACS
server

Store and transmit
identifier; receive and
display the screening
decision

Agricultural/ Bills of Lading Electronic Screening Program: Top-level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
Roadside DACS/DOR screening computer	Build New/ Buy	H	8
Upgrade communications Infrastructure to T1 or fiber	Buy	H	8

Agricultural/ Bills of Lading Electronic Screening Program: Issues



- **Florida administrative rule and law changes.**
- **Renovations of current department of agriculture and consumer services inspection sites.**
- **Funding.**



Florida CVISN Top-Level Design: Program-Wide Program Area



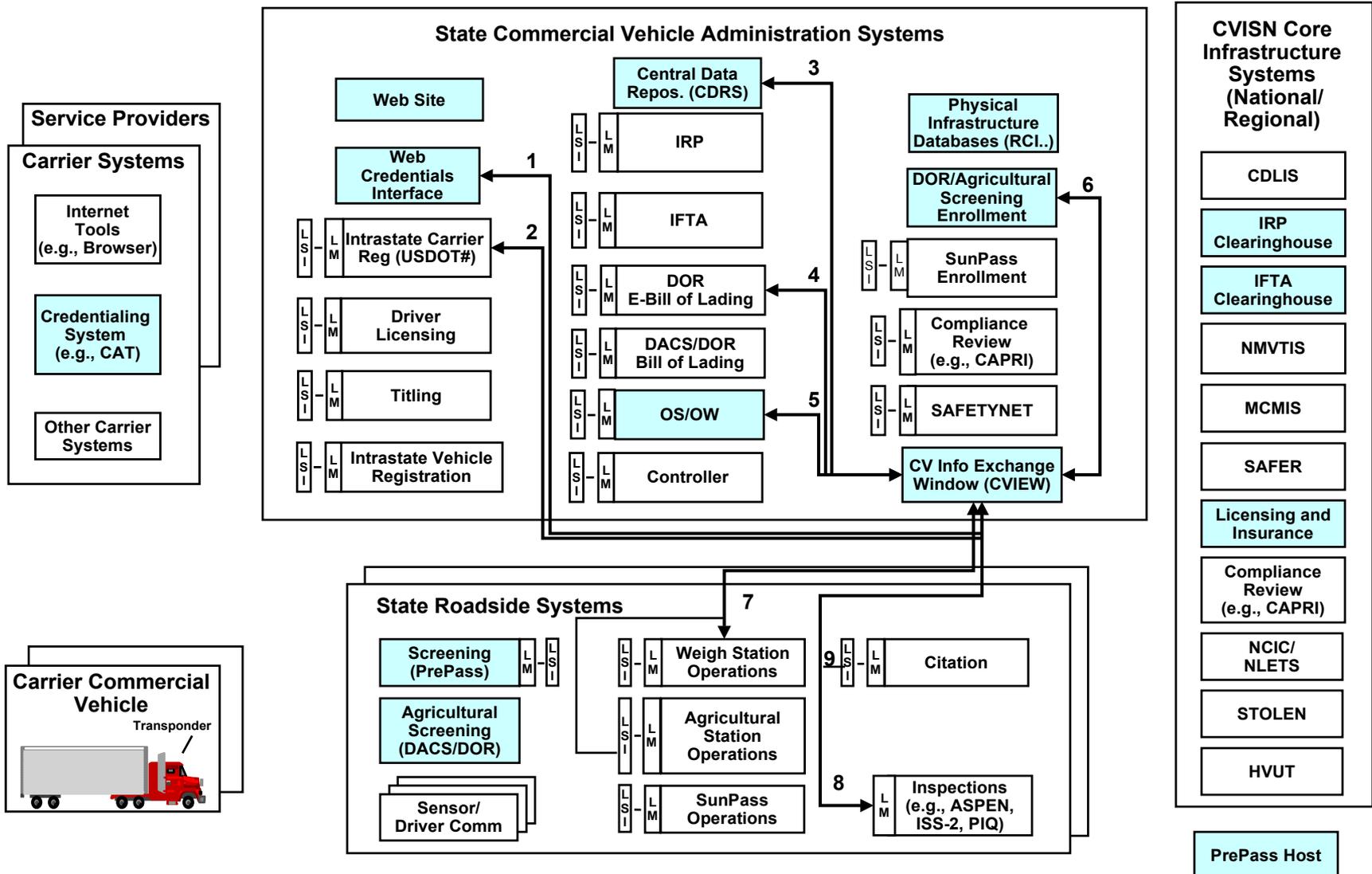
Florida CVISN Top-Level Design: CVIEW Connectivity to Systems Within Florida

CVIEW Connectivity to Systems Within Florida: Operational Scenario



- **Receive data from state systems.**
 - Non-relational state systems export data to flat files and transfer these files (via FTP or network copy) to the CVIEW server
 - Relational state systems connect to the CVIEW database and transfer data to input tables
 - Depending on CVIEW procurement strategy, EDI may be substituted
 - CVIEW receives and parses data and updates individual carrier / vehicle snapshots with new information
- **Provide data to state systems.**
 - Send carrier / vehicle snapshot information proactively (via timed data transfer) or reactively (in response to specific query) to state systems

CVIEW Connectivity to Systems Within Florida: Functional Thread Diagram



CVIEW Connectivity to Systems Within Florida: Operational Scenario



1. Credential applications routed through the Web Credentials Interface are sent to CVIEW when the credential is granted. This ensures the fastest possible transfer of up-to-date credential information to the roadside. The Web Credentials Interface connects to the CVIEW database using Oracle SQL*Net. Data are transferred using inserts and updates against a remote database.
2. When a new carrier is created, or an existing carrier is assigned a U.S. DOT number, this information is sent to CVIEW. Depending on the volume of DOT numbers assigned, transfers can occur immediately, daily or weekly.
3. The Central Data Repository holds IRP, IFTA and Vehicle Registration data in an Oracle database. The IRP, IFTA and Vehicle Registration mainframe applications connect to the CDRS to retrieve and update information. Data are transferred from the CDRS to CVIEW using inserts and updates against a remote database. Individual, real-time transfers are initiated by triggers. Bulk daily or weekly transfers are initiated by timed SNP jobs. *Note: information sent by CVIEW to these legacy systems will be sent to the individual application rather than the CDRS.*
4. The Electronic Agricultural/Bills of Lading system will produce, weekly or monthly, a flat file containing the status of all carriers enrolled in this program. DOR will transfer this file to the CVIEW server. CVIEW will read the file and update the appropriate carrier snapshots.

CVIEW Connectivity to Systems Within Florida: Operational Scenario



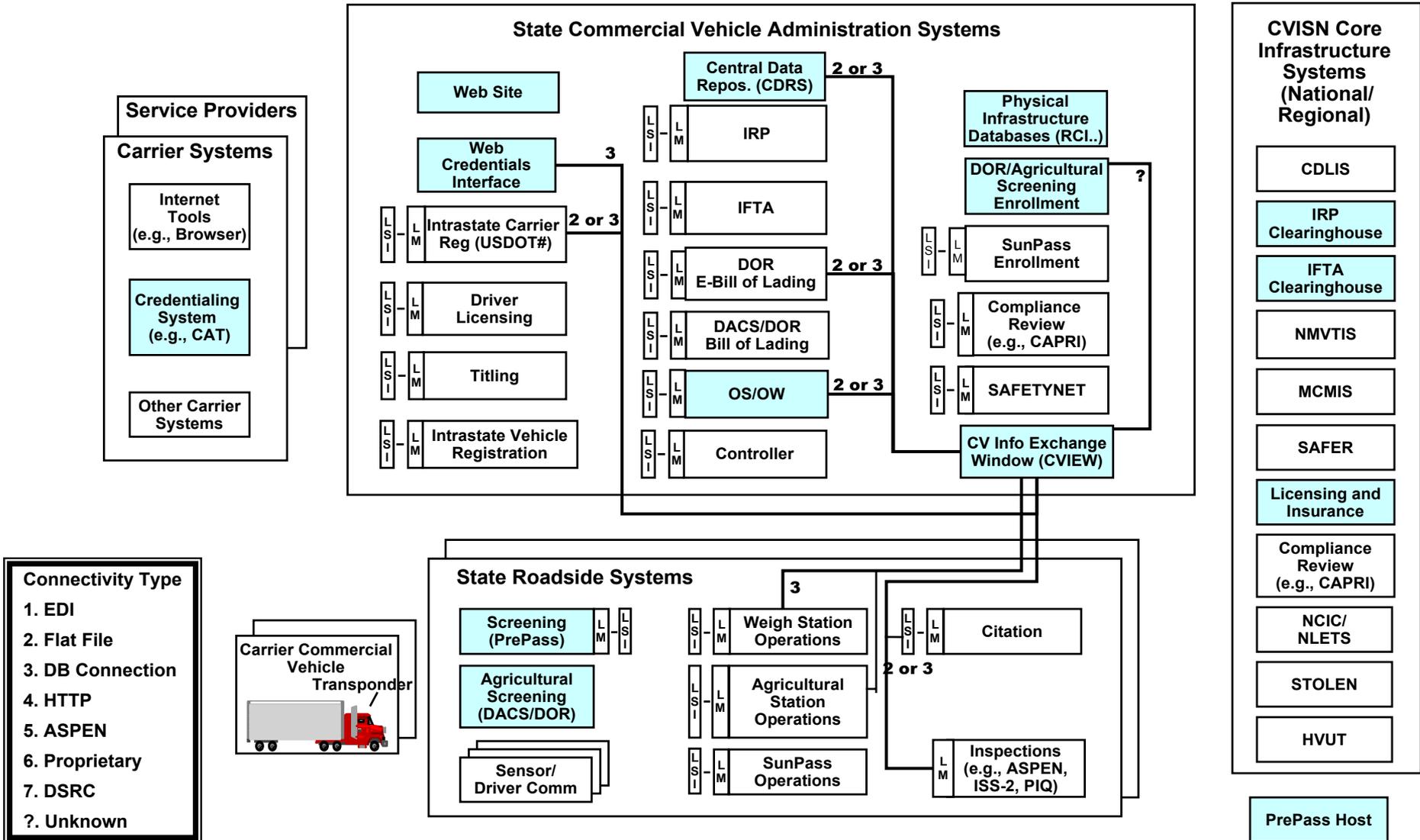
5. As each oversize/overweight permit is granted, information on the carrier and/or vehicle is transferred to CVIEW using a direct database connection. CVIEW updates the appropriate snapshots and makes the information available to the roadside.
6. When a carrier requests enrollment in the Florida electronic screening pre-clearance program, the system will send a query to CVIEW requesting information on the carrier and each vehicle being enrolled. Each query is sent as a flat file attached to an e-mail message. CVIEW will respond to each query by retrieving the appropriate information and sending it as a flat file attached to an e-mail message. In addition, as credential statuses change for carriers or vehicles already enrolled, CVIEW will proactively send an update (as a flat file attached to an e-mail message) to the screening system.
7. When a carrier requests enrollment in the Florida agricultural electronic screening pre-clearance program, the Department of Agriculture and Consumer Services will verify that the carrier meets the criteria for the program. When a carrier is enrolled, their status is updated in a new state system. If the system is developed in-house it will produce, weekly or monthly, a flat file containing the status of all carriers enrolled in this program. DACS will transfer this file to the CVIEW server. CVIEW will read the file and update the appropriate carrier snapshots.

CVIEW Connectivity to Systems Within Florida: Operational Scenario



8. CVIEW will deliver data as appropriate to computers at the state weigh stations. This operation is intended primarily to provide additional information about carriers and vehicles to enforcement personnel. Rather than replicate the entire CVIEW database at each weigh station, information will be delivered in response to specific queries. Weigh station software must be created or modified to query CVIEW and display the resulting snapshots.
9. Ideally we would like to store CVO citations in CVIEW. The system would at first store inspection violations then incorporate additional CVO related violations over time. As an alternative the state may develop their own internal ID similar to a USDOT number that would make it easier to track these violations within the state. A link would be required between CVIEW and the Citation database. The Citation system will produce, daily or weekly, a flat file containing new citations issued. MCCO will transfer this file to the CVIEW server. CVIEW will read the file and update the appropriate snapshots.

CVIEW Connectivity to Systems Within Florida: System Interfaces



CVIEW Connectivity to Systems Within Florida: Modifications Required to Existing Systems



- **An Oracle PL/SQL-based legacy system interface (LSI) must be installed in the CDRS to support sending data to CVIEW.**
- **If the IRP, IFTA or Vehicle Registration systems require CVIEW data, they must be modified to access the CVIEW database (using views or stored procedures).**
- **The intrastate carrier registration system must implement a SQL or flat file interface with CVIEW.**
- **The citation system must implement a SQL or flat file interface with CVIEW.**
- **Weigh station operations must be modified to send queries to CVIEW and receive/display the results.**

CVIEW Connectivity to Systems Within Florida: Functions to be Performed by New Systems



- **CVIEW will receive and store information from state systems and provide information to state systems.**
- **Each state system will interact with CVIEW through a legacy system interface (LSI).**
- **The Web Credentials Interface will manage credential applications received electronically. The Web Credentials Interface also will deliver information on completed applications and the credentials issued to CVIEW.**

CVIEW Connectivity to Systems Within Florida: Top-Level Physical Design



Allocation of Functions to Computers

System

Function

CVIEW

Receive and store information from state systems, responds to queries

CDRS

Repository for IRP, IFTA and Vehicle Reg data, send data to CVIEW

OS/OW

Manage / store permits, send data to CVIEW

Credentialing or Web Interface

Manage electronic applications, send new credential data to CVIEW

E-Screening Enrollment

Query CVIEW when enrolling new carriers / vehicles

Ag Screening Enrollment

Send enrollment status updates to CVIEW

Weigh Station Operations

Send queries to CVIEW and display data

Citation System

Send data to CVIEW

CVIEW Connectivity to Systems Within Florida: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
CVIEW	Buy / Build	M	2
LSIs	Buy / Build (one for each system that communicates with CVIEW)	L - M	3 - 6

CVIEW Connectivity to Systems Within Florida: Issues



- **Select a CVIEW implementation strategy.**
- **Select an OS/OW implementation strategy.**
- **Select an Agricultural Screening strategy.**
- **Specify content, format and timing for the information exchange with each state system, i.e. LSIs.**
- **Determine parameters to be used for queries, particularly from weigh stations.**
- **Determine whether citation data must be stored in CVIEW.**
- **Identify keys in each system for matching data to CVIEW snapshots.**

CVIEW Connectivity to Systems Within Florida: Procurement Needs



PROCUREMENT ITEM	CATEGORY	FUNDING SOURCE	TECHNICAL LEAD FOR REQTS	POTENTIAL VENDORS	PROC NOTES
Application Server for CVIEW	COTS	OCO or Work Program	FDOT or CVISN Executive Committee	DELL	1GHz Dual Processor Pentium III, 2 GB SDRAM, 8 bay tower w/5 32GB Hard Drives, RAID 5
CVIEW Application	COTS	Expense or Work Program	FDOT or CVISN Executive Committee	CS or APL	
Database Server	COTS	Expense	FDOT or CVISN Executive Committee	Oracle	
Database Software	COTS	Expense	FDOT or CVISN Executive Committee	Oracle	
EDI Run time Engine - (Mercator)	COTS	Expense	FDOT or CVISN Executive Committee	TSI Soft. Inc.	
Compression Software - (DynaZip)	COTS	Expense	FDOT or CVISN Executive Committee	Inner Media	
Email Software - (Distinct)	COTS	Expense	FDOT or CVISN Executive Committee	Distinct Corp.	
LSI Interfaces	COTS or internal development	Expense or Work Program	Based on legacy systems current ownership		



Florida CVISN Top-Level Design: CVIEW Connectivity to Systems Outside Florida

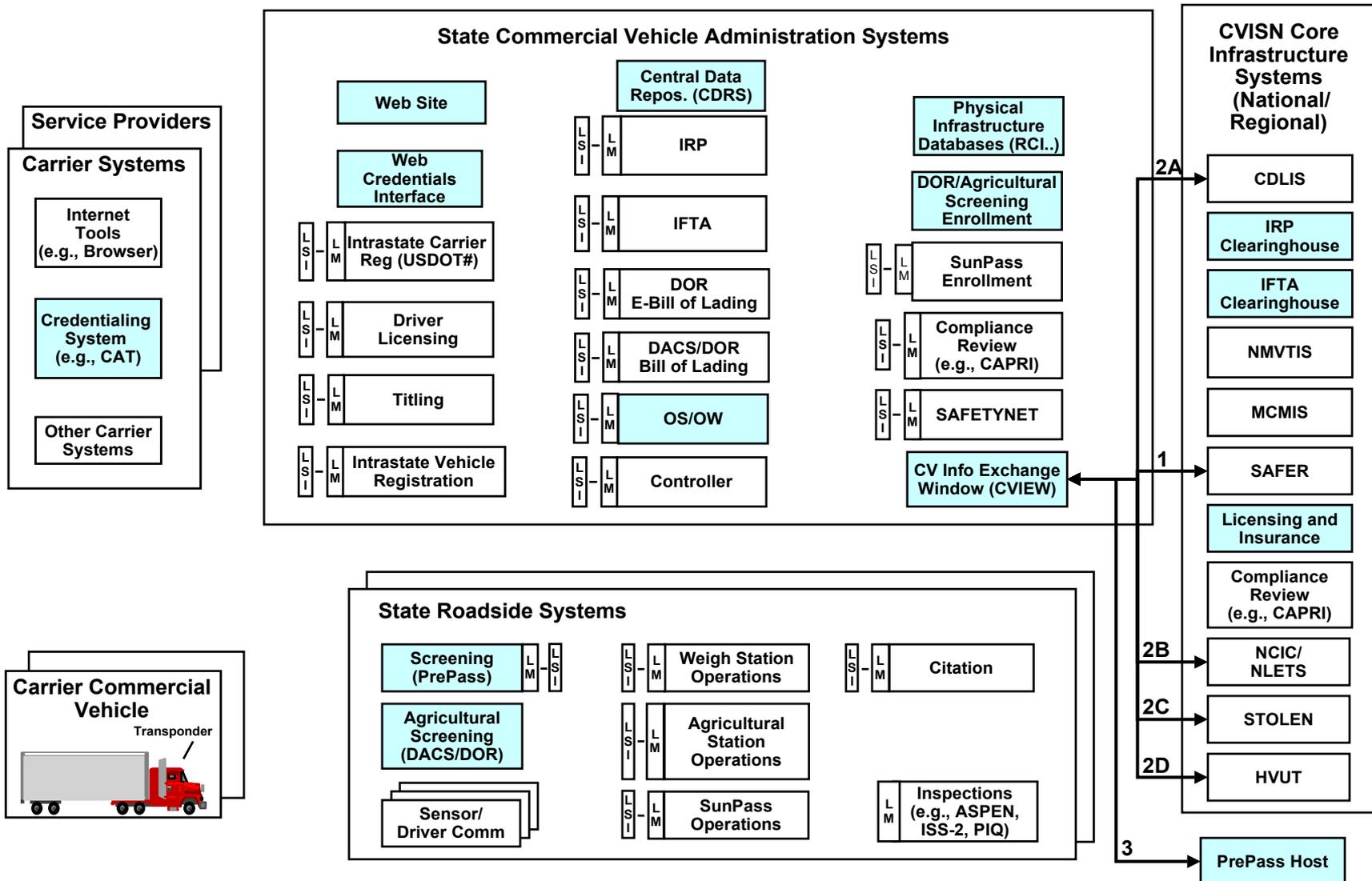
CVIEW Connectivity to Systems Outside Florida: Operational Scenario



- **Receive data from federal / third-party systems.**
 - SAFER sends EDI files attached to e-mail messages
 - PrePass sends flat files attached to e-mail messages
 - Other federal systems undefined at this time (see issues)
 - CVIEW receives and parses data and updates individual carrier / vehicle snapshots with new information

- **Provide data to federal / third-party systems.**
 - CVIEW sends to SAFER EDI files attached to e-mail messages
 - CVIEW sends to PrePass flat files attached to e-mail messages
 - Other federal systems undefined at this time (see issues)

CVIEW Connectivity to Systems Outside Florida: Functional Thread Diagram



CVIEW Connectivity to Systems Outside Florida: Operational Scenario



1. Florida will provide information to SAFER on the content and frequency of the carrier and vehicle data desired. SAFER will create subscriptions matching this information. SAFER will fulfill these subscriptions by creating EDI messages attached to e-mails held at the SAFER e-mail server. CVIEW will poll this server, retrieve the e-mails, extract and parse the EDI messages and create/update the corresponding snapshots in the CVIEW database.

To provide information to SAFER, the same mechanism will be used but in the opposite direction. Florida will determine the information they desire to provide to SAFER. Subscriptions(universe of carrier data desired, universe of vehicle data desired, and mailbox) will be created in CVIEW that will result in EDI messages attached to e-mails on the Florida e-mail server. SAFER will poll this server and process the messages.

All communications with SAFER will take place over a IPSec connection that must pass through the Florida firewall.

2. Parts A, B, C and D involve receiving and storing data from other federal systems. At this time there is insufficient information to determine whether Florida needs this data, whether the federal systems can provide this data and the content, format and timing of these exchanges (see issues).

CVIEW Connectivity to Systems Outside Florida: Operational Scenario



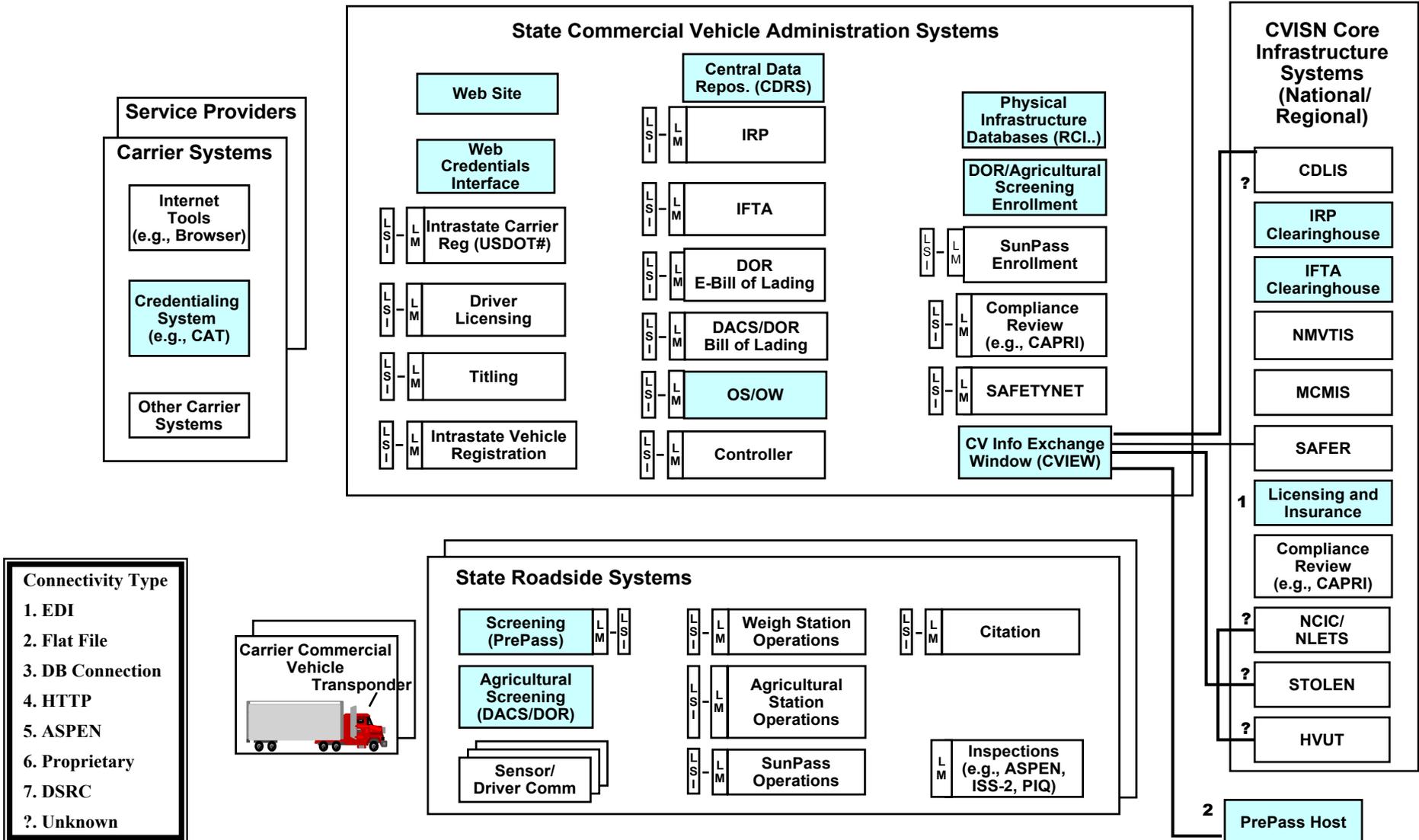
3. When a carrier requests enrollment in the Florida electronic screening pre-clearance program, PrePass will send a query to CVIEW requesting information on the carrier and each vehicle being enrolled. Each query is sent as a flat file attached to an e-mail message. CVIEW will respond to each query by retrieving the appropriate information and sending it as a flat file attached to an e-mail message. If information cannot be found on a carrier or vehicle, CVIEW will return an error message.

When a carrier or vehicle is successfully enrolled, PrePass will send a snapshot update to CVIEW. This update is sent as a flat file attached to an e-mail message. CVIEW will process each update and record the fact that a particular carrier or vehicle is enrolled in PrePass. This information will form the basis of a subscription that will allow CVIEW to notify PrePass of status changes for enrolled carriers and vehicles.

As credential statuses change for enrolled carriers or vehicles, CVIEW will proactively send an update (as a flat file attached to an e-mail message) to PrePass.

If a carrier or vehicle becomes unenrolled, PrePass will send a snapshot update to CVIEW reflecting this change in status.

CVIEW Connectivity to Systems Outside Florida: System Interfaces



*Depends on CVIEW solution chosen by Florida

CVIEW Connectivity to Systems Outside Florida: Modifications Required to Existing Systems



- **SAFER must establish carrier and vehicle snapshot subscriptions based on Florida's requirements.**
- **PrePass must query CVIEW for carrier and vehicle information and process the results during enrollment and when credential statuses change after enrollment.**

CVIEW Connectivity to Systems Outside Florida: Functions to be Performed by New Systems



- **CVIEW will receive and store carrier and vehicle snapshots from SAFER. CVIEW will send carrier and vehicle snapshots to SAFER.**
- **CVIEW may receive and store data from other federal systems (see issues).**
- **CVIEW will respond to carrier and vehicle queries from PrePass. CVIEW will proactively inform PrePass of changes in credential status of enrolled carriers and vehicles.**

CVIEW Connectivity to Systems Outside Florida: Top-Level Physical Design



Allocation of Functions to Computers

<u>System</u>	<u>Function</u>
CVIEW	Receive and store information from federal systems, send updates to SAFER, respond to queries, proactively inform PrePass of changes in credential status
PrePass	Query CVIEW for carrier and vehicle snapshots, process snapshots from CVIEW
SAFER	Receive and store information from many sources, including Florida. Send updates via subscriptions. Respond to queries.
Other Federal Systems	Unknown (see issues)

CVIEW Connectivity to Systems Outside Florida: Top-Level Physical Design



Description of System/Network Capabilities and Changes

<u>System</u>	<u>Activity</u>	<u>Level of Effort (L, M, H)</u>	<u>Phase (1-5)</u>
CVIEW	Buy / Build	M	2
SAFER Interface	Configure	L - M	5
PrePass Interface	Configure	L	5
Other Federal Systems	(See Issues)	?	?

CVIEW Connectivity to Systems Outside Florida: Issues



- **Determine whether Florida needs to exchange data with other federal systems (CDLIS, NCIC/NLETS, STOLEN, HVUT). If so, determine whether these systems can exchange data and the content, format, timing and security of the exchange.**
- **Resolve SAFER connectivity issues -- IPsec through Florida firewall, specifications for subscriptions to receive SAFER data, specifications of data to be sent to SAFER and emerging non-EDI transfer options.**
- **Determine data to be sent to PrePass to support screening enrollment and screening decision.**

Florida CVISN Top-Level Design



Section 4.0: Phase Charts and System Testing Strategy



Section Outline

- **Project Phase Charts**
- **System Testing**

Florida CVISN Progress Toward Level 1



- **Electronic Screening**
 - Level 1 Achieved
- **Safety Information Exchange**
 - **ASPEN**
 - Level 1 Achieved
 - **CVIEW**
 - Level 1 will be Achieved with the Deployment of a CVIEW in Phase 3
- **Credentials Administration**
 - Level 1 will be Achieved with the Delivery of IFTA and IRP Web-Based Applications in Phases 3 thru 9

Florida CVISN Program Phases



- **Phase 1:** January 2001-September 2001
- **Phase 2:** October 2001-December 2001
- **Phase 3:** January 2002-March 2002
- **Phase 4:** April 2002-June 2002
- **Phase 5:** July 2002-September 2002
- **Phase 6:** October 2002-December 2002
- **Phase 7:** January 2003-March 2003
- **Phase 8:** April 2003-June 2003
- **Phase 9:** July 2003-September 2003
- **Phase 10:** October 2003-September 2005

Phases 1 to 3: January 2001 to March 2002



Phase 1	Phase 2	Phase 3
1/01-9/01	10/01-12/01	1/02-3/02
<p><u>Program-Wide</u> Complete Scope of Work for HelpDesk Study</p>	<p><u>Program-Wide</u> CVIEW "Build/Buy" Decision Adopt CVISN E-Payment Strategy Begin HelpDesk Study</p>	<p><u>Program-Wide</u> Complete HelpDesk Study</p>
<p><u>Electronic Credentials Administration</u> Complete Planning Complete Scope of Work for Feasibility Study</p>	<p><u>Electronic Credentials Administration</u> Begin Feasibility Study</p>	<p><u>Electronic Credentials Administration</u> Complete Feasibility Study</p>
<p><u>Safety Information Exchange</u> Complete Scope of Work for Information Systems Inventory</p>	<p><u>Safety Information Exchange</u> Begin Information Systems Inventory Complete Deployment of ASPEN 2.0</p>	<p><u>Safety Information Exchange</u> Complete Information Systems Inventory</p>
<p><u>Electronic Screening Systems</u> Deploy PrePass at 12 Sites (Complete)</p>	<p><u>Electronic Screening Systems</u> Ag/BOL Screening Decision</p>	<p><u>Electronic Screening Systems</u> Deploy PrePass at 17 Sites</p>

Phases 4 to 6: April 2002 to December 2002



Phase 4	Phase 5	Phase 6
4/02-6/02	7/02-9/02	10/02-12/02
<p><u>Program-Wide</u> Adopt HelpDesk Strategy/Begin Deployment</p> <p><u>Electronic Credentials Administration</u> Complete OS/OW Web App Functionality Complete OS/OW Permit System Functionality OS/OW Link to MyFlorida.com</p> <p><u>Safety Information Exchange</u> Complete Information Systems Inventory</p> <p><u>Electronic Screening Systems</u> Deploy PrePass at 19 Sites</p>	<p><u>Program-Wide</u> Complete CVIEW Legacy System Interfaces Complete CVIEW/PrePass Interface Complete CVIEW/SAFER Interface Complete CVIEW Functionality Deploy HelpDesk</p> <p><u>Electronic Credentials Administration</u> IFTA Link to MyFlorida.com Complete Build of Internal Web Server for IFTA OS/OW Web App Functionality into Production OS/OW Permit System Functionality into Production</p> <p><u>Safety Information Exchange</u></p> <p><u>Electronic Screening Systems</u></p>	<p><u>Program-Wide</u> CVIEW Functionality into Production</p> <p><u>Electronic Credentials Administration</u> Complete IFTA Tax Filing Functionality Complete IFTA Renewal Functionality Complete IFTA Decal Functionality IRP Link to MyFlorida.com</p> <p><u>Safety Information Exchange</u></p> <p><u>Electronic Screening Systems</u></p>

System Testing

- **Florida will conduct unit, integration and acceptance tests on all software developed as part of its CVISN Program.**
- **Following acceptance of each system, a pilot test or parallel run will be conducted. Accordingly, system testing and pilot tests/parallel runs span the Program phases.**
- **Interoperability test will be performed between Florida CVISN and SAFER.**

Florida CVISN Top-Level Design



Appendix A: COACH, Part 1

**Intelligent Transportation Systems (ITS)
Commercial Vehicle Operations (CVO)**

**CVISN Operational and Architectural
Compatibility Handbook (COACH)**

Part 1

Operational Concept and Top-Level Design Checklists

Baseline Version

POR-97-7067 V2.0

August 2000

Note

The Motor Carrier Safety Improvement Act was signed into law on December 9, 1999. This act established a new FMCSA within the US DOT, effective January 1, 2000. Prior to that, the motor carrier and highway safety program was administered under the Federal Highway Administration (FHWA).

The mission of the FMCSA is to improve truck and commercial passenger carrier safety on our nation's highways through information technology, targeted enforcement, research and technology, outreach, and partnerships. The FMCSA manages the ITS/Commercial Vehicle Operations (CVO) Program, a voluntary effort involving public and private partnerships that uses information systems, innovative technologies, and business practice reengineering to improve safety, simplify government administrative systems, and provide savings to states and motor carriers. The FMCSA works closely with the FHWA's ITS JPO to ensure the integration and interoperability of ITS/CVO systems with the national ITS program.

This is a Baseline Issue

This document has completed internal and external reviews of previously published drafts and preliminary versions. All comments received to date have been incorporated or addressed.

Note: This document and other CVISN-related documentation are available for review and downloading by the ITS/CVO community from the JHU/APL CVISN site on the World Wide Web. All updates to this document will be maintained and published on that site; hardcopies of future versions will not normally be distributed. The URL for the CVISN site is:

<http://www.jhuapl.edu/cvisn/>

Additional review and comments to this document are welcome.

Ms. Theresa G. Nester
The Johns Hopkins University
Applied Physics Laboratory
11100 Johns Hopkins Road
Laurel, MD 20723-6099

Phone: 443-778-8760
Fax: 443-778-6149
E-Mail: theresa.nester@jhuapl.edu

Change Summary:

This document is under configuration management by the CVISN Architecture Configuration Control Board. The list below provides a brief description of the change request forms (CRFs) processed by the board that impacted this document. Soon we hope to post the CRFs on the CVISN Web site referenced above.

Version V1.0 of the document incorporated revisions related to these change reports:

- 970116 – Stakeholder view, system names, flows associated with inspection reporting
- 970303 – Capability names
- 970307 – Add intrastate vehicle registration where missing
- 970312 – A baseline update of design drawings to incorporate comments received from stakeholders and the CVISN technical team. Additional top-level design information has also been added.
- 970710 – Change groupings on Stakeholder View; add Treasury
- CRF 220 – Change inspection reporting/retrieval paths & methods
- CRF 285 – Add WebCAT, remove Safety Information System; change CAT to Credentialing System (e.g., CAT)
- CRF 311 – Clarify ITS/CVO versus CVISN Architecture
- CRF 493 – Update COACH Part 1 Chapter 4
- CRF 356 – Modifies the way intrastate inspections are reported
- CRF 529 – Add Electronic Screening Enrollment to the design
- CRF 530 – Add Licensing & Insurance, RSPA HazMat, SSRS; remove UCR
- CRF 548 – Primary Carrier ID
- CRF 549 – Transponder ID
- CRF 564 – Update COACH Part 1 Chapters 1, 3, 5-8

References to the CRFs listed below appear in the text or tables of the document so that the reader knows how each CRF affected Version V2.0 of the document

Version V2.0 of the document incorporates revisions related to these change reports:

- CRF 313 – Disapproved (EDI interface for IRP CH)
- CRF 632 – Add general operational concept to COACH to explain CVISN Level 1 focus
- CRF 827 – Snapshot update views & control, esp. how SAFER & CVIEW should handle data from multiple sources
- CRF 1047 – Update CVISN to include Archived Data User Service
- CRF 1048 – Update CVISN for Web sites and XML for Credentialing
- CRF 1084 – Update Design Template and Stakeholder View
- CRF 1154 – Simplify and consolidate the COACH Part 1
- CRF 1155 – Add conformance requirements

- CRF 1159 – Update DSRC references
- CRF 1164 – Clarify interface options (EDI, XML, Web, other) for Safety
- CRF 1171 – Use Snapshots for E-Screening in Automated Process
- CRF 1172 – Clarify & complete concepts and requirements for E-Screening Enrollment

**CVISN Operational and Architectural Compatibility Handbook (COACH)
Part 1 - Operational Concept and Top-Level Design Checklists**

Table of Contents

1. Introduction.....	1
1.1 COACH Structure	1
1.2 COACH Part 1 Description.....	2
1.3 COACH Heritage.....	2
1.4 CVISN System Design	4
1.5 How States Should Use This Document	5
2. Guiding Principles.....	9
2.1 ITS/CVO Guiding Principles [Reference 17]	9
2.1.1 ITS/CVO Guiding Principles : Summary	9
2.1.2 ITS/CVO Guiding Principles: General CVO.....	10
2.1.3 ITS/CVO Guiding Principles: CVISN Architecture.....	12
2.1.4 ITS/CVO Guiding Principles: CVISN Deployment.....	12
2.1.5 ITS/CVO Guiding Principles: Safety Assurance.....	13
2.1.6 ITS/CVO Guiding Principles: Credentials & Tax	14
2.1.7 ITS/CVO Guiding Principles: Roadside Operations	15
2.2 Fair Information Principles for ITS/CVO [Reference 18].....	16
2.3 ITS/CVO Interoperability Guiding Principles [Reference 19]	18
2.3.1 ITS/CVO Interoperability Guiding Principles: General.....	18
2.3.2 ITS/CVO Interoperability Guiding Principles: Hardware	19
2.3.3 ITS/CVO Interoperability Guiding Principles: Systems/Software	20
2.3.4 ITS/CVO Interoperability Guiding Principles: Operations	20
2.3.5 ITS/CVO Interoperability Guiding Principles: Program	21
3. State Institutional Framework.....	23

4. State Systems Checklists29

4.1 *General Operational Concepts and State Systems Design Requirements30*

4.2 *State Safety Information Exchange and Safety Assurance Systems Design Requirements37*

4.3 *State CV Administration Systems Design Requirements42*

4.4 *State Electronic Screening Systems Design Requirements51*

5. References.....58

1. INTRODUCTION

The CVISN Operational and Architectural Compatibility Handbook (COACH) provides a comprehensive checklist of what is required to conform with the Commercial Vehicle Information Systems and Networks (CVISN) operational concepts and architecture. It is intended for use by state agencies with a motor carrier regulatory function. Other readers may include motor carriers and developers/operators of CVISN Core Infrastructure systems.

Reference 1, the CVISN Glossary, contains an acronym list as well as brief descriptions of many commonly used terms.

1.1 COACH Structure

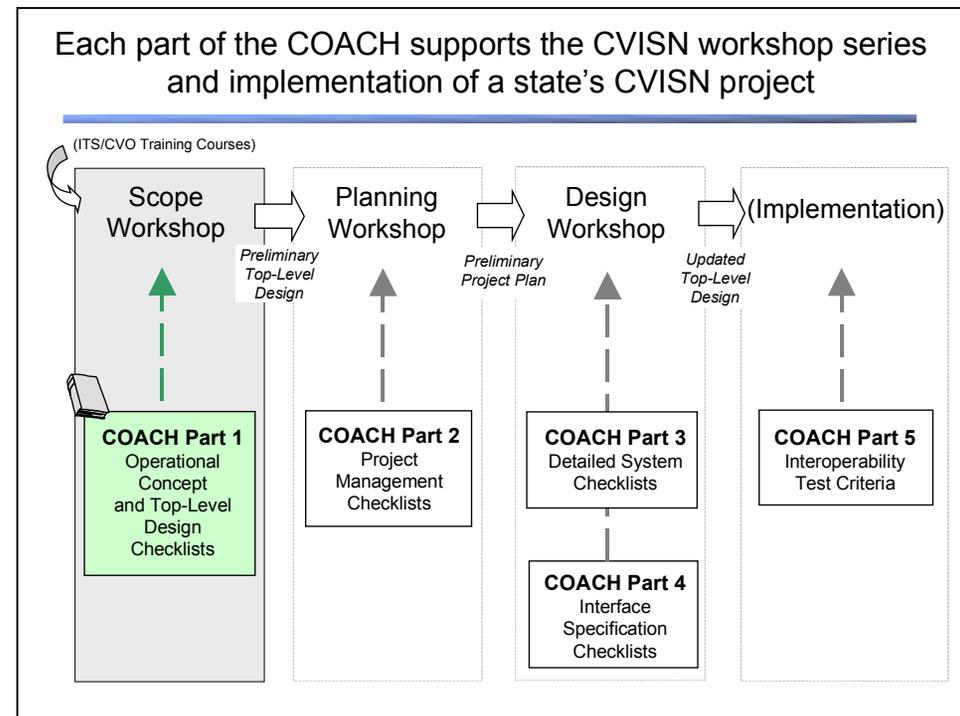
The COACH is divided into 5 parts:

Part 1 - Operational Concept and Top-Level Design Checklists

- Part 2 - Project Management Checklists
- Part 3 - Detailed System Checklists
- Part 4 - Interface Specification Checklists
- Part 5 - Interoperability Test Criteria

This is the fourth revision to the COACH Part 1 [see References 2, 3, and 36 for earlier versions]. The other parts of the COACH are available at the Browse and Download Documentation; Architecture section of the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>. Updated versions of Parts 3 [Reference 5] and 4 [Reference 6] will be published in 2000.

Figure 1.1-1 The COACH supports the workshops



1.2 COACH Part 1 Description

This is Part 1. Part 1 includes several types of checklists related to operational concepts and top-level design. In accordance with CRF 1154, this version of the document has been restructured to simplify and consolidate material as shown below:

- Guiding Principles: high level strategic guidelines [Chapter 2]
- State Institutional Framework Checklists: compatibility requirements for the policies and coordinating activities for states [Chapter 3]
- CVISN Operational Concepts and Top-level Design Checklists: compatibility requirements for processes and top-level compatibility requirements for state designs [Chapter 4]. In this version of the COACH Part 1, the tables that listed the planned or proposed capabilities for CVISN Core Infrastructure systems and carrier systems have been removed.

The COACH Part 1 checklists are intended to be used to indicate the scope and depth of CVISN commitment, and to provide a mechanism for planning development and test activities. Each state should maintain a filled-in master copy of the COACH.

1.3 COACH Heritage

The first versions of this part of the COACH [References 2, 3, and 36] were derived from other CVISN technical documents:

- Introduction to CVISN [Reference 8]
- CVISN Operational Concept Document [Reference 9]
- CVISN Architecture Specification [Reference 10]
- CVISN System Design Description [Reference 11]

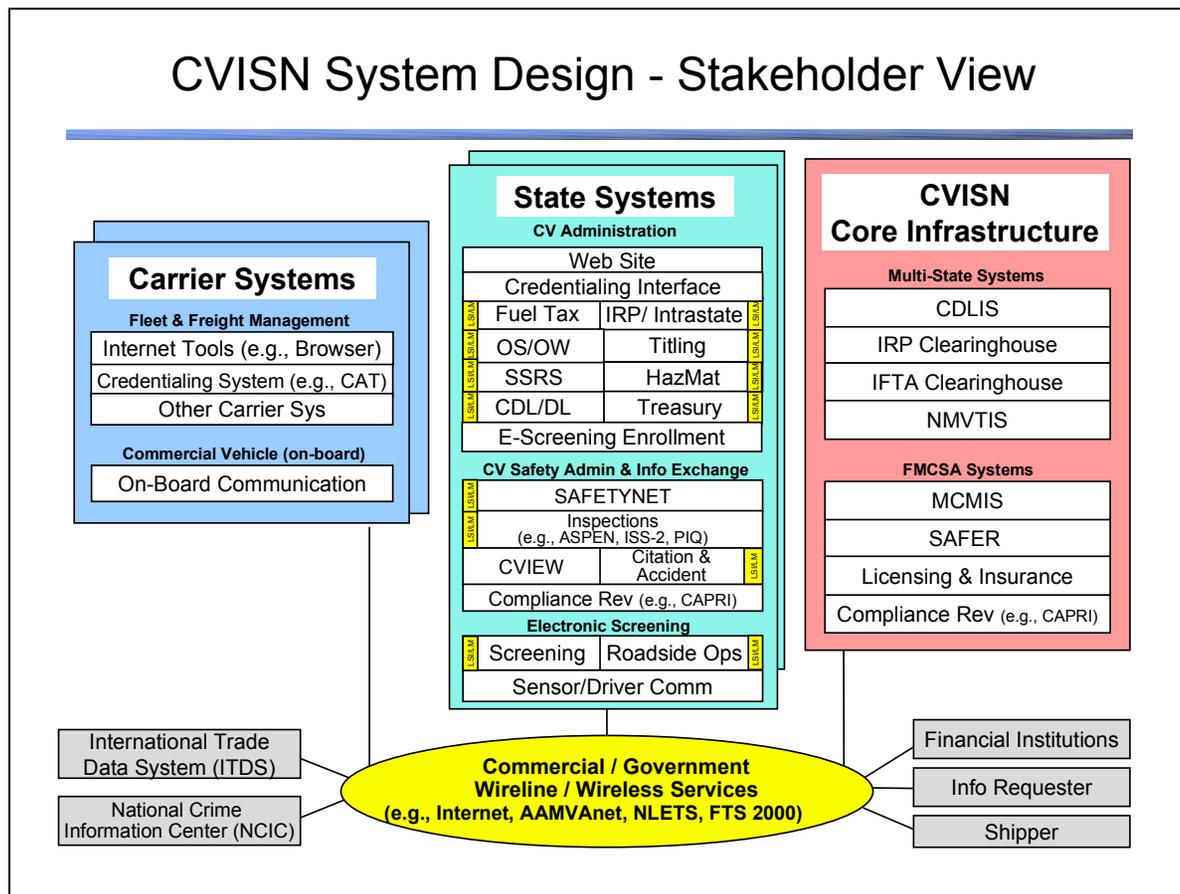
Only the last document in that list is still being maintained. The other documents have been replaced with some of the volumes in the CVISN Guide series. Technical guidance about CVISN is now provided in:

- The CVISN General and Technical Guides
- Introductory Guide to CVISN [Reference 12]
- CVISN Guide to Top-Level Design [Reference 13]
- CVISN Guide to Safety Information Exchange [Reference 14]
- CVISN Guide to Credentials Administration [Reference 15]
- CVISN Guide to Electronic Screening [Reference 16]
- Other volumes of the COACH [Reference 4-7]
- CVISN System Design Description [Reference 11]
- Electronic Data Interchange standards and implementation guides [References 25, 27-31]
- Dedicated Short-Range Communications standards [References 32-34]

1.4 CVISN System Design

The figure below depicts the CVISN System Design - Stakeholder View. CRF 1084, requesting that the diagram be updated to reflect current terminology and components involved in CVISN, has been applied. Chapter 4 of this document focuses on the State systems. For a brief description of each system shown on this figure, see the CVISN System Design Description [Reference 11].

Figure 1.4-1 CVISN System Design - Stakeholder View



1.5 How States Should Use This Document

The COACH summarizes key concepts and architectural guidelines for CVISN. The COACH focuses on topics important to states. The COACH Part 1 defines the CVISN Level 1 criteria.

To gain a more complete understanding of CVISN, state planners and designers should read the Introductory Guide to CVISN [Reference 12], other parts of the COACH [References 4-7], and the CVISN System Design Description [Reference 11]. This version of the COACH Part 1 is intended to be a working document that is used for setting requirements for modifications and enhancements to existing state systems, and for planning the development of new systems in states. This document will be used first in the CVISN Scope workshop.

The key concepts and architectural guidelines for CVISN states have been summarized in this document in a series of checklist tables. Each table in this document consists of these columns, unless otherwise noted:

- Commit Level (F/P/N) – the state’s commitment level to the item
 - Using the first column of each checklist entry, a **commitment level should be filled in** by the state. There are three possible levels of commitment:
 - (F) This rating indicates a full commitment. This level means that at least 80% of the state’s systems involved in the process implied by the checklist item are compatible or are intended to be compatible with the checklist item statement.
 - (P) This rating indicates a partial commitment. This level means that between 50% and 80% of the state’s systems involved in the process implied by the checklist item are compatible or are intended to be compatible with the checklist item statement.
 - (N) This rating indicates no commitment. This level means that less than 50% of the state’s systems involved in the process implied by the checklist item are compatible or are intended to be compatible with the checklist statement.
- Item # – a label to identify each row in the table.
- Compatibility Criteria - summary versions of operational concepts or architectural guidelines, culled from other CVISN documentation.

- Req Level (chapters 3 and 4 only) - the compatibility requirement level assigned to this compatibility criterion by the FMCSA CVISN project team

For a state to be “compatible with CVISN,” it must implement selected items in the checklists. To distinguish those items, the CVISN project team has assigned a **compatibility requirement level** to each checklist item:

(L1) This rating identifies a CVISN Level 1 compatibility requirement.

(E) This rating indicates an enhanced level of CVISN capability. These items may require a little longer to complete (3-4 years).

(C) This rating indicates a complete level of CVISN capability. Satisfying all these provides complete CVISN compatibility. These items are expected to require a longer-range (5 or more years) time frame.

States are expected to focus initially on checklist items with an *L1* compatibility requirement level rating. Making a *partial commitment* indicates that the state will at least demonstrate the feasibility of that concept or architectural guideline. Making a *full commitment* indicates that the state will fully implement the concept or architectural guideline and be ready for the next steps.

CRF # - if the item has been changed since the last revision, the Change Request Form (CRF) number for the CR that triggered the document update will appear in this column. A list of all CRFs incorporated in this revision is included on the back of the title page.

- Op Test Date (chapter 4 only) - to be used for planning/tracking by the owner of a particular copy of the document; indicates when the criterion is to be (has been) operationally tested (op test); may refer to a milestone by name rather than a specific date; if plans change, this column should be updated accordingly
- IOC Date (chapter 4 only) - to be used for planning/tracking by the owner of a particular copy of the document; indicates when initial operating capability (IOC) for the criterion is to be (has been) achieved; may refer to a milestone by name rather than a specific date; if plans change, this column should be updated accordingly
- FOC Date (chapter 4 only) - to be used for planning/tracking by the owner of a particular copy of the document; indicates when final operating capability (FOC) for the criterion is to be (has been) achieved; may refer to a milestone by name rather than a specific date; if plans change, this column should be updated accordingly

- Comments – available for the state to refer to another document or plan, note a question, record a clarifying comment, etc.

If the state maintains its master copy of this document electronically, the following conventions are recommended when filling in the columns to illustrate the “firmness” of the state’s plan:

- *Italics type* : Tentative, not approved by the final decision makers
- Regular type : Approved by the decision makers (or supported by consensus)
- **Bold type** : Completed

States are to fill out the “Commit Level” column for the tables in chapters 2 (Guiding Principles), 3 (State Institutional Framework), and 4 (State Systems Checklists) prior to attending the CVISN Scope Workshop. Since the first workshop focuses on *what* the states will do rather than *when* those actions will be scheduled, it is not necessary to complete the planning columns (Op Test Date, IOC Date, FOC Date) for the CVISN Scope Workshop. The remainder of the columns will be completed as the project progresses.

This Page Intentionally Blank

2. GUIDING PRINCIPLES

Statements of principle are being used to document fundamental concepts and guidelines supported by the CVO community. In addition to the specific checklists provided in subsequent sections, these guiding principles provide a top-level checklist of fundamental guidelines for all CVISN activities. CVO stakeholders should ensure that their actions are consistent with these principles. No planning columns are included in the tables for guiding principles since the principles provide guidance rather than specific details that can be scheduled or measured.

The guiding principles were developed under the auspices of the ITS America CVO Program Subcommittee [References 17, 18, 19]. These principles continue to be under review by ITS America and the US Department of Transportation. They will be updated as required to reflect the consensus of the CVO community. The current principles are copied verbatim into the tables in this chapter.

2.1 ITS/CVO Guiding Principles [Reference 17]

“The ITS America CVO Committee presents this set of guiding principles which will guide the states and federal government on matters concerning technology and commercial vehicle operations. This list of 39 guiding principles was established by the CVO Programs Subcommittee with representation from National Private Truck Council, ATA, carriers, owner operators, motorcoach representation, UPS, several state administrative and regulatory agencies, AAMVA, AASHTO, and Canada. These principles took two years to create and 100% consensus was reached.

2.1.1 ITS/CVO Guiding Principles : Summary

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	1.	A balanced approach involving ITS/CVO technology as well as institutional changes will be used to achieve measurable improvements in efficiency and effectiveness for carriers, drivers, governments, and other CVO stakeholders. Specific technology and process choices will be largely market-driven .	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	2.	The CVISN architecture will enable electronic information exchange among authorized stakeholders via open standards.	
F	3.	The architecture deployment will evolve incrementally , starting with legacy systems where practical and proceeding in manageable steps with heavy end-user involvement .	
F	4.	Safety assurance activities will focus resources on high risks , and be structured so as to reduce the compliance costs of low-risk carriers and drivers.	
F	5.	Information technology will support improved practices and procedures to improve CVO credential and tax administration efficiency for carriers and government.	
F	6.	Roadside operations will focus on eliminating unsafe and illegal operations by carriers, drivers, and vehicles without undue hindrance to productivity and efficiency of safe and legal carriers and drivers.	

2.1.2 ITS/CVO Guiding Principles: General CVO

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	1.	To the extent possible, ITS/CVO technology development and deployment will be market-driven . The federal role in ITS deployment will be limited to instances in which a government role is indispensable and in which the technology is proven and reliable.	For CVISN Level 1 concepts. DOR use tax requirements may not be market-driven.
F	2.	Investment and participation in ITS/CVO technology will be voluntary .	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	3.	The relative benefits of various ITS/CVO technology applications and investments will be assessed quantitatively using measures of effectiveness and established methods of quality control.	
F	4.	Potential ITS/CVO technology applications will be evaluated against regulatory choices involving low-technology and non-technological options to ensure applications are cost-effective for both government and industry .	
F	5.	Government CVO policies and regulatory practices will permit safe and legal carriers and drivers to operate without unnecessary regulatory and administrative burdens .	
F	6.	Stakeholders will use technology and institutional reform to implement continuous process improvement and cost-effective process re-engineering.	
F	7.	The confidentiality of proprietary and other sensitive stakeholder information will be preserved.	
F	8.	The United States CVO community will work to implement compatible policies and architecture and interoperable systems in all states.	
F	9.	The United States CVO community will work with those in Canada, Mexico, and other nations to encourage compatible policies and architecture and to implement interoperable systems throughout North America and, when possible, worldwide.	

2.1.3 ITS/CVO Guiding Principles: CVISN Architecture

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	1.	The CVISN architecture will be open , modular, and adaptable.	
F	2.	The architecture will enable data exchange among systems, a key to reaching CVO objectives. Methods used to exchange data will ensure data integrity and prevent unauthorized access .	
F	3.	Data exchange will be achieved primarily via common data definitions , message formats, and communication protocols. These enable development of interoperable systems by independent parties.	
P	4.	A jurisdiction shall have and maintain ownership of any data collected by any agent on its behalf.	Except for screening data collected by PrePass
F	5.	The architecture will accommodate existing and near-term communications technologies.	
F	6.	The architecture will accommodate proven technologies and legacy systems whenever possible.	
F	7.	The CVISN architecture will allow government and industry a broad range of options , open to competitive markets, in CVO technologies.	

2.1.4 ITS/CVO Guiding Principles: CVISN Deployment

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	1.	The feasibility of the architecture will be demonstrated incrementally in simulations, prototypes, operational tests, and pilots. There will be heavy end-user involvement in each step of the process.	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	2.	After feasibility has been demonstrated, key architectural elements will be incorporated into appropriate national and international standards .	
F	3.	The architecture deployment will evolve incrementally , starting with legacy systems where practical and proceeding in manageable steps.	
F	4.	Strong federal leadership will foster voluntary cooperative efforts within government jurisdictions and among groups of other stakeholders to develop systems which are in accord with the architecture.	

2.1.5 ITS/CVO Guiding Principles: Safety Assurance

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	1.	Carriers and drivers will be responsible for the safe and legal operation of commercial vehicles.	
F	2.	Jurisdictions will develop and implement uniform standards, practices, procedures, and education programs to improve safety. These activities will leverage market forces that encourage safety.	
F	3.	Jurisdictions will focus safety enforcement resources on high risk carriers and drivers. They will remove chronic poor performers from operation and help cooperative marginal performers to improve.	
F	4.	Jurisdictions will conduct inspections and audits to provide incentives for carriers and drivers to improve poor performance and to collect information for assessing carrier and driver performance.	
F	5.	Jurisdictions will use a safety risk rating for all carriers based on best available information and common criteria.	MCCO: What is meant by Safety Risk Rating?

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	6.	Jurisdictions will identify high risk drivers based on best available information and common criteria.	
F	7.	Safety programs will provide benefits which exceed costs for carriers and drivers as well as governments.	MCCO: Unsure what is meant.

2.1.6 ITS/CVO Guiding Principles: Credentials & Tax

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F P	1.	Electronic information will be used in place of paper documents for the administration of CVO credential and tax requirements.	DHSMV/DOR: P Must address statutory requirements to carry paper on vehicles (e.g., cab cards for IRP) & possession required by 320.0605, F.S.
F	2.	Authorized users will be able to electronically exchange credential and tax-related information and funds via open standards and transmission options.	
F	3.	The information needed to administer tax and credential programs involving carriers, drivers, and vehicles will be available to authorized officials , on a need-to-know basis.	
F	4.	Individual jurisdictions, or their designated agent, will be the authoritative source of information on credentials they issue.	

2.1.7 ITS/CVO Guiding Principles: Roadside Operations

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	1.	Roadside operations will focus on eliminating unsafe and illegal operations by carriers, drivers, and vehicles and will be designed and administered to accomplish this in a manner that does not unduly hinder the productivity and efficiency of safe and legal motor carriers and drivers.	
P N	2.	Jurisdictions will support CVO roadside operations programs with timely, current, accurate, and verifiable electronic information , making it unnecessary for properly equipped vehicles to carry paper credentials.”	DHSMV: N - Must address statutory requirements to carry paper on vehicles (e.g., cab cards for IRP) & possession required by 320.0605, F.S. DOT/DOR: P

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
Complete code descriptions are given in section 1.5.

2.2 Fair Information Principles for ITS/CVO [Reference 18]

“These fair information principles were prepared in recognition of the importance of protecting individual privacy in implementing Intelligent Transportation Systems (ITS) for Commercial Vehicle Operations (CVO). They have been adopted by the ITS America CVO Technical Committee.

These principles represent values and are designed to be flexible and durable to accommodate a broad scope of technological, social, and cultural change. ITS America may, however, need to revisit them periodically to assure their applicability and effectiveness.

These principles are advisory, intended to educate and guide transportation professionals, policy-makers, and the public as they develop fair information and privacy guidelines for specific ITS/CVO projects. They are not intended to supersede existing statutes or regulations. Initiators of ITS/CVO projects are urged to publish the fair information principles that they intend to follow. Parties to ITS/CVO projects are urged to include enforceable provisions for safeguarding privacy in their contracts and agreements.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>FIP #1</u>	<u>Privacy</u> The reasonable expectation of privacy regarding access to and use of personal information should be assured. The parties must be reasonable in collecting data and protecting the confidentiality of that data.	
F	<u>FIP #2</u>	<u>Integrity</u> Information should be protected from improper alteration or improper destruction.	
F	<u>FIP #3</u>	<u>Quality</u> Information shall be accurate, up-to-date, and relevant for the purposes for which it is provided and used.	
F	<u>FIP #4</u>	<u>Minimization</u> Only the minimum amount of relevant information necessary for ITS applications shall be collected; data shall be retained for the minimum possible amount of time.	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>FIP #5</u>	<u>Accountability</u> Access to data shall be controlled and tracked; civil and criminal sanctions should be imposed for improper access, manipulation, or disclosure, as well as for knowledge of such actions by others.	
F	<u>FIP #6</u>	<u>Visibility</u> There shall be disclosure to the information providers of what data are being collected, how they are collected, who has access to the data, and how the data will be used.	
F	<u>FIP #7</u>	<u>Anonymity</u> Data shall not be collected with individual driver identifying information, to the extent possible.	
F	<u>FIP #8</u>	<u>Design</u> Security should be designed into systems from the beginning, at a system architecture level.	
F	<u>FIP #9</u>	<u>Technology</u> Data encryption and other security technologies shall be used to make data worthless to unauthorized users.	
F	<u>FIP #10</u>	<u>Use</u> Data collected through ITS applications should be used only for the purposes that were publicly disclosed.	
F	<u>FIP #11</u>	<u>Secondary Use</u> Data collected by the private sector for its own purposes through a voluntary investment in technology should not be used for enforcement purposes without the carrier's consent.	

Date approved by the Board of Directors: April 22, 1999

Note: These guiding principles address only issues of privacy and data control. They do not address all issues related to concepts of operations or interoperability. These issues are addressed in separate guiding principles.”

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
 Complete code descriptions are given in section 1.5.

2.3 ITS/CVO Interoperability Guiding Principles [Reference 19]

“These interoperability guiding principles were prepared in recognition of the importance of promoting interoperability in the implementation of Intelligent Transportation Systems (ITS) for Commercial Vehicle Operations (CVO). They have been adopted by the ITS America CVO Technical Committee.

These principles represent values and are designed to be flexible and durable to accommodate a broad scope of technological, social, and cultural change. ITS America may, however, need to revisit them periodically to assure their applicability and effectiveness.

These principles are advisory, intended to educate and guide transportation professionals, policy-makers, and the public as they develop interoperability guidelines for specific ITS/CVO projects. They are not intended to supersede existing statutes or regulations. Initiators of ITS/CVO projects are urged to publish the interoperability principles that they intend to follow. Parties to ITS/CVO projects are urged to include enforceable provisions for assuring interoperability in their contracts and agreements.

2.3.1 ITS/CVO Interoperability Guiding Principles: General

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #1</u>	The CVO community will work to implement interoperable ITS/CVO systems in all United States jurisdictions.	
F	<u>IGP #2</u>	The CVO community will work with the CVO communities in Canada and Mexico to implement interoperable ITS/CVO systems throughout North America.	
F	<u>IGP #3</u>	The CVO community will work to ensure that ITS/CVO systems, where appropriate, are interoperable with other ITS systems (e.g., electronic toll systems).	
F	<u>IGP #4</u>	Interoperable ITS/CVO systems will be achieved through the development, adoption, and adherence to common standards for hardware, systems/software, operations, and program administration.	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #5</u>	Each jurisdiction will support the national ITS/CVO information system architecture and data exchange standards developed under the Commercial Vehicle Information Systems and Networks (CVISN) program.	
F	<u>IGP #6</u>	Transponders shall have a unique identifier.	
FN F F	<u>IGP #7</u>	Information systems supporting electronic screening, credentials administration, and safety assurance will use: 7a. US DOT numbers for the identification of both interstate and intrastate motor carriers. 7b. Commercial Drivers License (CDL) numbers for the identification of commercial drivers. 7c. Vehicle Identification Numbers (VIN) and license plate numbers for the identification of power units.	DHSMV: N Database modifications needed to capture intrastate data.

2.3.2 ITS/CVO Interoperability Guiding Principles: Hardware

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
N	<u>IGP #8</u>	Commercial vehicle operators will be able to use one transponder for power unit-to-roadside communications in support of multiple applications including electronic screening, safety assurance, fleet and asset management, tolls, parking, and other transaction processes.	Not with Tolls
F	<u>IGP #9</u>	Public and public-private DSRC applications will support open standards that are consistent with the national ITS architecture.	

2.3.3 ITS/CVO Interoperability Guiding Principles: Systems/Software

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #10</u>	Public and public-private organizations will support open data exchange standards for the state-state, state-federal, state-provincial, and carrier-agency exchange of safety and credentials information as described in the national ITS architecture.	

2.3.4 ITS/CVO Interoperability Guiding Principles: Operations

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #11</u>	Jurisdictions will support common standards for placement of DSRC transponders on trucks and buses to ensure the safe and cost-effective use of transponders.	
F	<u>IGP #12</u>	Jurisdictions will support a common set of recommended practices concerning the selection, layout, and signage of roadside screening sites (i.e., weigh stations, ports-of-entry, international border crossings, and temporary inspection sites) to ensure safe operations.	
F	<u>IGP #13</u>	Jurisdictions will support a common performance standard for roadside electronic enforcement screening and passage of transponder-equipped motor carriers to ensure equity in enforcement.	MCCO will set by-pass criteria.
F	<u>IGP #14</u>	Roadside electronic enforcement screening criteria will include the following: motor carriers must be enrolled in the jurisdiction's program; must meet the jurisdiction's enrollment criteria; and must meet all legal requirements established by the jurisdiction.	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #15</u>	Jurisdictions will support quarterly reviews of carrier qualifications to ensure that the standards evolve to meet the changing needs of government and motor carriers.	
F	<u>IGP #16</u>	A jurisdiction will not retain the identification codes or other data from the DSRC transponders of passing motor carriers who are not enrolled in the jurisdiction's program.	
F	<u>IGP #17</u>	Jurisdictions will support a common performance standard for selection of vehicles and drivers for roadside safety inspection.	
F	<u>IGP #18</u>	Jurisdictions will support a common performance standard for recording and reporting roadside safety inspection results.	
F	<u>IGP #19</u>	Jurisdictions will support a common performance standard for reconciling disputed roadside safety inspection results.	

2.3.5 ITS/CVO Interoperability Guiding Principles: Program

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #20</u>	Motor carrier participation in ITS/CVO roadside electronic screening programs will be voluntary; motor carriers will not be required to purchase or operate DSRC transponders.	
F	<u>IGP #21</u>	Motor carriers will have the option of enrolling in any ITS/CVO roadside electronic screening program.	
F	<u>IGP #22</u>	Jurisdictions will support uniform criteria for enrollment of motor carriers in ITS/CVO roadside screening programs.	
F	<u>IGP #23</u>	Enrollment criteria will include consideration of safety performance and credentials status (e.g., registration, fuel and highway use taxes, and insurance).	
F	<u>IGP #24</u>	No jurisdiction will be required to enroll motor carriers that do not meet the criteria for enrollment.	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Comments
F	<u>IGP #25</u>	Motor carriers may obtain a DSRC transponder from the enrolling jurisdiction or a compatible DSRC transponder from an independent equipment vendor of the motor carrier's choice.	
F	<u>IGP #26</u>	Each jurisdiction will determine the price and payment procedures, if any, for motor carriers to enroll and participate in its ITS/CVO electronic screening program.	
F	<u>IGP #27</u>	Jurisdictions shall work to establish business interoperability agreements among roadside electronic screening programs.	
N	<u>IGP #28</u>	A jurisdiction will make a motor carrier's DSRC transponder unique identifier available to another jurisdiction upon written request and authorization by the motor carrier.	PrePass will not allow this
F	<u>IGP #29</u>	Jurisdictions will work toward development of a single point of contact for motor carriers enrolling in more than one ITS/CVO roadside screening program.	
F	<u>IGP #30</u>	Each jurisdiction will fully disclose and publish its practices and policies governing, at a minimum: 30a. Enrollment criteria; 30b. Transponder unique identifier standards; 30c. Price and payment procedures for transponders and services; 30d. Screening standards; 30e. Use of screening event data; and 30f. Business interoperability agreements with other programs.”	

Date approved by the Board of Directors: April 22, 1999

Note: These guiding principles address only issues of interoperability. They do not address all issues related to concepts of operations or privacy and data control. These issues are addressed in separate guiding principles.”

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
Complete code descriptions are given in section 1.5.

3. STATE INSTITUTIONAL FRAMEWORK

The checklist in this section summarizes the institutional and business planning steps that states should take to become ready to implement the CVISN architecture and concepts. The checklist is based on the ideas outlined in the January 1999 letter from the Director, Office of Motor Carrier Safety & Technology on CVISN Workshops [Reference 23] and the CVISN Model Deployment Request for Information and Request for Application [References 21-22].

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
N	1.	The State has contacted or has plans to contact State and local transportation officials to explore potential joint-uses of transponders and ensure integration among multiple applications (i.e., CVO, toll, traffic probes, parking management, etc.)	L1 CRF 1155	Interoperability with PrePass transponders to be addressed later.
F	2.	The State has evaluated or has plans to evaluate the data that is being collected for CVISN initiatives to determine if other State and local transportation entities (e.g., traffic management center) outside the CVO community could use the data which is collected under CVISN deployment, consistent with data privacy agreements.	L1 CRF 1155	
F	3.	The State has conducted or has plans to conduct outreach to its motor carrier partners about metropolitan and rural ITS initiatives within the State that could provide benefits to its motor carrier operations. Examples of these initiatives include web sites on roadway weather information systems, incident management systems, and traffic management systems.	L1 CRF 1155	
F	4.	The State is committed to complete the full cycle of the workshops, and upon completion, to begin deployment of the ITS/CVO systems and services that meet the unique economic, administrative, and transportation needs, as outlined in the State ITS/CVO Business Plan.	L1	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	5.	A qualified core project team that will participate in all three of the workshops has been identified. This project team must include the following individuals: the State's CVISN project manager; the State's CVISN system architect; a project facilitator/administrator, who could be a representative of a participating State agency or a consultant working with the State; operations staff representing the agencies responsible for the State's major CVO functional areas (i.e., IRP, IFTA, safety information systems, roadside safety inspections, size and weight enforcement, and credentials enforcement); staff from the State department of information technology or comparable information technology units within the State CVO agencies; representative of the State Department of Transportation; representatives of the FMCSA and FHWA Division office; and a motor carrier industry representative (invited). See Reference 23 for qualification details.	L1	
F N	6.	Appropriate and sufficient staff, equipment, and State and private funding are available to carry out the deployment of CVISN and ITS/CVO services. The CVISN project has sufficient priority (i.e., other higher-priority projects are not competing for the same resources).	L1	DOR/DHSMV: N - DHSMV - Other Competing Priorities
P	7.	A State CVO strategic plan and/or business plan exists and has been accepted by the FHWA (or FMCSA). It outlines the goals, strategies, anticipated benefits and costs, organization, projects, schedules, and resources relevant to achieving the envisioned CVO environment.	L1	
F	8.	A planning and coordination process exists which includes all State agencies involved in any aspect of motor carrier safety and regulation.	L1	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
P	9.	The top executives and chief information systems managers of each involved agency have endorsed State CVO plans and given the CVISN project manager adequate authority.	L1	DOR: Not yet.
F	10.	A process for resolution of conflicts among participating agencies exists.	L1	
F	11.	State agencies have a strong commitment to customer service and the ability to work with the motor carrier industry in their State.	L1	
F	12.	State agencies involve the motor carrier industry in the planning process.	L1	
F	13.	State agencies conduct education programs to improve the safety performance and regulatory compliance of motor carriers.	L1	
F	14.	State agencies provide periodic forums for obtaining suggestions and concerns from the motor carrier industry.	L1	
F	15.	State agencies actively pursue opportunities for and implement business process reengineering projects.	L1	
F	16.	An e-mail system is available among agencies.	L1	
F	17.	At least key agency staff members have access to the Internet.	L1	
F	18.	The State has adopted an open standard (ANSI ASC X12, for example) for electronic data interchange with the public.	L1	
F	19.	The State's communications infrastructure is sufficiently developed to extend to the kinds of exchanges needed under the CVISN Architecture.	L1	
F	20.	There are no State legislative barriers relative to data privacy, physical signature requirements, data exchange among agencies, data exchange with other states, or other uses of information technology required to implement the CVISN concept of operations.	L1	
P	21.	The legislature provides adequate resources to support an active ITS/CVO program and deployment of the ITS/CVO services.	L1	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	22.	The State participates in one or more regional CVO forums to assist in developing regional and national interoperable systems and compatible policies and procedures.	L1	
F	23.	The State is willing to provide timely, electronic information to the planned clearinghouses to support the base state agreements.	L1	
F	24.	The project team has completed the ITS/CVO technical training courses. The first course, Introduction to ITS/CVO, is recommended for workshop participants but can be waived for personnel with prior ITS/CVO knowledge and experience. The second course, ITS/CVO Technical Project Management for Non-Technical Managers, and third course, Understanding ITS/CVO Technology Applications, are required for the personnel who will represent each State at the workshops.	L1	
	25.	The State has identified and made adequate progress towards the resolution of any Y2K problems among CVO agencies. It is strongly recommended that States resolve any Year 2000 computer problems among CVO agencies before beginning the workshops.	L1	No longer applicable.
P	26.	Effective procurement plans and processes are in place to acquire services and equipment needed to support the CVISN project, and the CVISN team is aware of constraints the processes impose.	L1	
F	27.	Effective subcontract management processes are in place and allow timely identification and resolution of performance problems.	L1	
F	28.	The CVISN team has a clear understanding of the State-specific requirements for information technology projects, e. g., whether or not a feasibility study is required.	L1	
F	29.	The CVISN team has a clear understanding of the State-specific budget cycles and is aware of constraints they impose.	L1	

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

This Page Intentionally Blank

4. STATE SYSTEMS CHECKLISTS

The checklists in this chapter describe operational concepts and top-level requirements. The tables are divided into these categories:

- General
- CV Administration
- Safety Information Exchange and Safety Assurance
- Electronic Screening

Operational concepts and top-level requirements in the “general” category apply to the other three categories.

For each category there are two tables.

- The first table in each category lists Operational Concepts. The concepts are based on an interpretation of the guiding principles and the state of existing and emerging technologies today. The elements in each table in this section were originally based on the Key Operational Concepts sections of the OCD [Reference 9]. Updated versions of the operational concepts are included in the CVISN Guide to Top-Level Design [Reference 13] and in the CVISN Guides to Safety Information Exchange, Credentials Administration, and Electronic Screening [References 14-16]. This version of the COACH reflects the updated concepts.
- The second table in each category lists top-level requirements for the design of state systems. The tables show more detail about what “CVISN Level 1” means. The CVISN Level 1 requirements are marked with “L1” in the fourth column (Req Level (L1/E/C)). For an overview of CVISN Level 1, see the Introductory Guide to CVISN [Reference 12].

4.1 General Operational Concepts and State Systems Design Requirements

The general state system design requirements apply to **all** state systems. They facilitate interoperability and the exchange of information within a single state, and across jurisdictions. These requirements apply to safety, credentialing, and electronic screening systems.

CRF 1048 authorized updating CVISN documents to reflect FMCSA's new policy on credentials administration. The policy change resulted from analyzing the results of a survey about electronic credentialing interactions between motor carriers and state information systems (see Reference 38). The new policy is:

- FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface.
- FMCSA recommends that states survey their stakeholders to determine whether both interfaces would be appropriate.
- FMCSA recommends that, in the near term (over the next ~2 years), carriers and states use X12 EDI for computer-to-computer interfaces unless the state has evidence that customers support another approach.
- FMCSA encourages the exploration of XML as an alternative to EDI.

This is a policy regarding CVISN Level 1. If a state chooses to implement only a person-to-computer credentialing approach, then implementation of a computer-to-computer interface is considered an Enhanced capability. Similarly, if a state chooses to implement only a computer-to-computer credentialing approach, then implementation of a person-to-computer interface is considered an Enhanced capability. The tables in this section have been updated accordingly.

The concepts in the following table are based on an interpretation of the guiding principles and the state of existing and emerging technologies today. The elements in this table were originally based on the Key Operational Concepts sections of the OCD [Reference 9]. Updated versions of the operational concepts are included in the CVISN Guide to Top-Level Design [Reference 13] and in the CVISN Guides to Safety Information Exchange, Credentials Administration, and Electronic Screening [References 14-16]. This version of the COACH reflects the updated concepts.

Table 4.1-1 General Operational Concepts

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	1.	Good business processes can be enhanced through improved automated access to accurate information.	L1	
F	2.	Authoritative sources are responsible for maintaining accurate information. Each jurisdiction participating in ITS/CVO information exchange identifies the authoritative source for each data item.	L1	
F	3.	Sometimes it is practical for authoritative systems to authorize indirect sources to assist in the information exchange process.	L1	
F for interstate, P for intrastate	4.	To enable cross-referencing and standard look-ups in multiple information systems, a common scheme for identifying carriers must be adopted. The Primary Carrier ID should be used in interface agreements (open standards, Internet-based exchanges, and custom interface agreements) to facilitate the exchange of carrier information. How the ID is stored internally outside the interface is up to the system implementers. The ID should be based on the USDOT number for both interstate and intrastate carriers. If it is not feasible for the state to use USDOT number as the ID type for all intrastate carriers, then the state should establish some convention for the Primary Carrier ID that will apply to all intrastate carriers in that state.	L1 – interstate C – intrastate	May need legislative change to extend to all intrastate carriers.
F	5.	To enable cross-referencing and standard look-ups in multiple information systems, a common scheme for identifying drivers must be adopted for interstate and intrastate operators. The Commercial Drivers License (CDL) number should be the basis of the Driver ID.	L1	Need to ensure that social identifying information is provided only to those authorized to receive these data.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	6.	To enable cross-referencing and standard look-ups in multiple information systems, a common scheme for identifying vehicles must be adopted for interstate and intrastate operators. The Vehicle Identification Numbers (VIN) and jurisdiction plus license plate numbers should be the bases for the identification of power units.	L1	
F	7.	To enable cross-referencing and standard look-ups in multiple information systems, a common scheme for identifying international trips must be adopted. The Trip/Load number consisting of DUNS and trip-specific ID should be the basis for identifying international trips.	E	
F	8.	Standard information exchange is supported via carrier and vehicle (and eventually driver) snapshots.	L1 – carrier & vehicle C – driver	
F	9.	Flexible implementation/deployment options are accommodated by the ITS/CVO architecture. As technology changes, so will the architecture.	L1	
F	10.	Open standards are used for interchanges between public and private computer systems. Today, ANSI ASC X12 EDI transactions are used for some carrier-state information systems' interactions. We anticipate that XML will be also used in the future. DSRC standards for the messages, data link, and physical layers are used for vehicle-roadside interactions.	L1 CRF 1048 CRF 1164	
F	11.	Enhanced data exchange will allow all activities to focus resources on high risk operators.	L1	
F	12.	Interoperability is assured by a process of architecture conformance checks throughout a project's lifecycle, culminating in execution of standardized interoperability tests. If a tested system is changed, the interoperability tests are re-run as part of the re-validation process.	L1	

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
P F	13.	The Fair Information Principles for ITS/CVO will be implemented using a combination of policies, procedures, technology, and training. Stakeholders will be included in the discussions of the techniques to be used to implement the principles.	L1	DOR has restrictions on disclosure of information.
F	14.	Citations are based on a review of real-time conditions and checks with authoritative sources.	L1	
F	15.	The Internet is used as a wide area network for information exchange.	L1 CRF 1084	DOR cannot accept/exchange information without secure network. Development of secure network is in progress.
F	16.	The World Wide Web is used for interactions and information exchanges between private people and government systems (e.g., for credentials applications or commercial vehicle regulations).	L1 CRF 1048 CRF 1164	DOR cannot accept/exchange information without secure network. Development of secure network is in progress.
F	17.	The focus is on sharing data among safety, credentialing and screening processes. The CVISN Program is structured to encourage states to design and deploy these three elements in parallel.	L1 CRF 632	DOR has restrictions on disclosure of information.

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

The top-level requirements in the following table apply to the design of all state systems. The table shows more detail about what “CVISN Level 1” means. The CVISN Level 1 requirements are marked with “L1” in the fourth column (Req Level (L1/E/C)). For an overview of CVISN Level 1, see the Introductory Guide to CVISN [Reference 12].

Table 4.1-2 General State Systems Design Requirements Checklist

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	4.1.1	Adopt standard identifiers for carriers, vehicles, drivers, and transponders to support information exchange.	L1					
F	1	Adopt standard identifiers for interstate carrier, vehicle, driver, and transponder.	L1					
F	2	Adopt standard identifiers for intrastate carrier, vehicle, driver, and transponder.	C					
F	4.1.2	Use the World Wide Web for person-to-computer interactions between private citizens and state information systems.	L1;E	CRF 1048 CRF 1164				DOR cannot accept/exchange information without secure network. Development of secure network is in progress.
F	4.1.3	Use open standards for computer-to-computer exchange of information with other jurisdictions and with the public.	L1; E	CRF 1048 CRF 1164				DOR cannot accept/exchange information without secure network. Development of secure network is in progress.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	1	Use ANSI X12 EDI standards for transactions between state information systems and private systems (CV operators, insurance companies, etc.).	L1; E					See the note about CRF 1048 for credentialing, above; EDI is recommended in the near term.
F	2	Use ANSI X12 EDI standards for transactions between state information systems and CVISN Core Infrastructure systems, where available.	L1; E					See the note about CRF 1048 for credentialing, above; EDI is recommended in the near term.
F	3	Use XML standards for transactions between state information systems and private systems (CV operators, insurance companies, etc.) (contingent on demonstration of feasibility).	E					
F	4.1.4	Ensure that all information transfers, fee payments, and money transfers are authorized and secure.	L1					

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	4.1.5	Exchange safety and credentials data electronically within the state to support credentialing, safety, and other roadside functions. Where useful, exchange snapshots.	L1					Need to resolve issues of passing data to PrePass from DSHMV.
F	1	Data for interstate carriers	L1					
F	2	Data for interstate vehicles	L1					
F	3	Data for intrastate carriers	E					
F	4	Data for intrastate vehicles	E					
F	5	Data for drivers	C					With authorized agencies only.
P	4.1.6	Demonstrate technical interoperability by performing Interoperability Tests.	L1					
F	4.1.7	Support electronic payments.	E					
F	4.1.8	Receive, collect, and archive relevant CVO data for historical, secondary, and non-real-time uses.	E					
				CRF 1047				

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

4.2 State Safety Information Exchange and Safety Assurance Systems Design Requirements

The state safety information exchange and safety assurance systems are likely to consist of:

- Inspection (e.g., ASPEN)
- SAFETYNET
- Citation & Accident
- Compliance Review (e.g., CAPRI (Compliance Analysis Performance Review Information))
- CV Information Exchange Window (CVIEW)

The state CV safety information exchange and safety assurance systems will operate at one or more (generally) fixed locations within a state. The systems perform safety information exchange and safety assurance functions supporting safety regulations. States may form regional alliances to support these functions. Each state coordinates with other states, regional alliances, and CVISN Core Infrastructure systems to support nationwide access to safety information for administrative and enforcement functions.

The concepts in the following table are based on an interpretation of the guiding principles and the state of existing and emerging technologies today. The elements in this table were originally based on the Key Operational Concepts sections of the OCD [Reference 9]. Updated versions of the operational concepts are included in the CVISN Guide to Top-Level Design [Reference 13] and in the CVISN Guide to Safety Information Exchange [Reference 14]. This version of the COACH reflects the updated concepts.

Table 4.2-1 Safety Information Exchange and Safety Assurance Operational Concepts

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	1.	Data are collected to quantify the primary measures of effectiveness related to safety of CVO (accidents and fatalities).	L1	
F	2.	Electronic safety records (snapshots) are made available at the roadside to aid inspectors and other enforcement personnel.	L1	DOT: Needed for Roadside Enforcement.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	3.	Inspectors use computer applications to capture, verify, and submit intrastate and interstate inspection data at the point of inspection.	L1	
F	4.	Safety data are made available electronically to qualified stakeholders.	L1	
F	5.	User access to data is controlled (restricted and/or monitored) where necessary.	L1	Need to ensure confidentiality of carrier/ driver data among different stakeholder groups.
F	6.	Mechanisms are made available for operators to dispute safety records held by government systems.	L1	
F	7.	Compliance reviews are supported through electronic access to government-held safety records.	E	
F	8.	Safety risk ratings are determined according to uniform guidelines.	E	
F	9.	Jurisdictions support a standard set of criteria for inspection selection.	E	
F	10.	A comprehensive safety policy, including roadside and deskside activities, is implemented to improve safety.	C	
F	11.	Carriers are associated with a base state for safety information record storage and credentialing.	C	
F	12.	Compliance reviews are supported through electronic access to carrier-held records.	C	

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

The top-level requirements in the following table apply to the design of state safety-related systems. The table shows more detail about what “CVISN Level 1” means. The CVISN Level 1 requirements are marked with “L1” in the fourth column (Req Level (L1/E/C)). For an overview of CVISN Level 1, see the Introductory Guide to CVISN [Reference 12].

Table 4.2-2 State Safety Information Exchange and Safety Assurance Systems Design Requirements Checklist

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
	4.2.1	Use ASPEN (or equivalent) at all major inspection sites	L1					
F	1	Select vehicles and drivers for inspection based on availability of inspector, standard inspection selection system, vehicle measures, and random process, as statutes permit.	L1					
F	2	Report interstate inspections to MCMIS via SAFETYNET	L1					
F	3	Report intrastate inspections to SAFETYNET	L1					
F	4	Submit interstate and intrastate inspections for 45-day storage to SAFER.	L1					
F	5	Periodically check OOS orders issued in the state to focus enforcement and safety assurance activities.	E					
F	6	To assist in inspection, use DSRC to retrieve summary vehicle safety sensor data, if driver allows and vehicle is properly equipped.	C					
P	7	To assist in inspection, use DSRC to retrieve driver’s daily log, if driver allows and vehicle is properly equipped.	C					Concern about driver privacy.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	8	Use electronically-generated driver's daily log, if driver offers as an alternative to a manually-maintained log during an inspection.	C				
F	4.2.2	SAFETYNET 2000 submits interstate and intrastate inspections reports to SAFER.	L1				
F	4.2.3	Maintain snapshots (or equivalent information) for operators based in the state and make available to within-state information systems and users.	E CRF 827				
F	1	For any given snapshot, there is only one authoritative source (or group of authoritative sources, such as ASPEN units) for each field in that snapshot.	E CRF 827				
F	2	Allow only the authoritative source to update a snapshot data field, with the following exception: • A "super user" can update any field. An audit trail should be maintained to record super user updates.	E CRF 827				
F	3	Validate the sender's identity through some industry-standard means (account ID, IP address, password, security keys, . . .).	E CRF 827				
F	4	Reject updates attempted by any system other than the authoritative source or a super user with a code explaining why. The rejection transaction should be returned to the sender in a timely fashion. The rejection should be logged for the snapshot system administrator to review.	E CRF 827				
F	4.2.4	Use CAPRI (or equivalent) for compliance reviews.	L1				
F	1	Report interstate compliance reviews to MCMIS via SAFETYNET	L1				Florida normally only conducts Intra-state CR's

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	4.2.5	Collect, store, analyze, and distribute citation data electronically.	E					
F	1	Report citations for interstate operators to MCMIS via SAFETYNET	E					
F	4.2.6	Collect, store, analyze, and distribute crash data electronically.	E					
F	1	Report interstate crashes as required to MCMIS via SAFETYNET	E					
F	4.2.7	Compute carrier safety risk rating for intrastate carriers based on safety data collected.	E					Will not issue ratings but will use data to select
F	4.2.8	Identify high risk drivers based in the state through regular performance evaluation of various factors such as license status, points, and inspections.	C					

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

4.3 State CV Administration Systems Design Requirements

The state CV administrative systems are likely to consist of:

- Interstate & Intrastate Vehicle Registration
- Fuel Tax Credentialing/Tax Return Processing
- Credentialing Interface
- Web Site (CRF 1084)
- Carrier Registration (SSRS)
- Driver licensing
- Titling
- Treasury or Revenue
- HazMat Credentialing/Permitting
- Oversize/Overweight Permitting
- Electronic Screening Enrollment – see section 4.4 on Electronic Screening (CRF 1172)

These systems operate at one or more (generally) fixed locations within a state. The systems perform administrative functions supporting credentials and tax regulations. States may form regional alliances to support these functions. Each state coordinates with other states, regional alliances, and CVISN Core Infrastructure systems to support nationwide access to credentials information for administrative and enforcement functions.

When building a credentialing system, it is useful to think about the process of electronic screening enrollment as part of the design criteria. The requirements for Electronic Screening Enrollment have been moved to the section on Electronic Screening, since the enrollment would not occur unless operators wanted to participate in electronic screening. CRF 1172 authorized this change.

CRF 1048 authorized updating CVISN documents to reflect FMCSA's new policy on credentials administration. The policy change resulted from analyzing the results of a survey about electronic credentialing interactions between motor carriers and state information systems (see Reference 38). The new policy is:

- FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface.
- FMCSA recommends that states survey their stakeholders to determine whether both interfaces would be appropriate.
- FMCSA recommends that, in the near term (over the next ~2 years), carriers and states use X12 EDI for computer-to-computer interfaces unless the state has evidence that customers support another approach.
- FMCSA encourages the exploration of XML as an alternative to EDI.

This is a policy regarding CVISN Level 1. If a state chooses to implement only a person-to-computer credentialing approach, then implementation of a computer-to-computer interface is considered an Enhanced capability. Similarly, if a state chooses to implement

only a computer-to-computer credentialing approach, then implementation of a person-to-computer interface is considered an Enhanced capability. The tables in this section have been updated accordingly.

The concepts in the following table are based on an interpretation of the guiding principles and the state of existing and emerging technologies today. The elements in this table were originally based on the Key Operational Concepts sections of the OCD [Reference 9]. Updated versions of the operational concepts are included in the CVISN Guide to Top-Level Design [Reference 13] and in the CVISN Guide to Credentials Administration [Reference 15]. This version of the COACH reflects the updated concepts.

Table 4.3-1 CV Administration Operational Concepts

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	1.	Credential applications and fuel tax returns are filed electronically from CVO stakeholder facilities.	L1	
F	2.	Internal state administrative processes are supported through electronic exchange of application data, safety records, carrier background data, and other government-held records.	L1	Long-term commitment, but do not anticipate this change for all systems today.
F	3.	IRP and IFTA base state agreements are supported electronically.	L1	
F	4.	Credential and fuel tax payment status information for interstate operators are made available electronically nationally to qualified stakeholders.	L1	
F	5.	User access to data is controlled (restricted and/or monitored) where necessary.	L1	
F	6.	Mechanisms are made available for operators to dispute credentials records held by government systems.	L1	
F	7.	Fees and taxes are paid electronically.	E	Long-term commitment, but do not anticipate this change for all systems today.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
P	8.	Electronic access to administrative processes and information is available from “one stop shops” in public sites.	E	Need to explore concept further.
P	9.	Credential and fuel tax payment status information for intrastate operators are made available electronically to qualified stakeholders throughout the state.	E	Do not collect fuel tax information for intrastate carriers.
F	10.	Carrier audits are accomplished with electronic support.	C	
P	11.	The “paperless vehicle” concept is supported, i.e. electronic records become primary and paper records become secondary.	C	Must address statutory requirements to carry paper on vehicles (e.g., cab cards for IRP).

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

The top-level requirements in the following table apply to the design of state credentials-related systems. The table shows more detail about what “CVISN Level 1” means. The CVISN Level 1 requirements are marked with “L1” in the fourth column (Req Level (L1/E/C)). For an overview of CVISN Level 1, see the Introductory Guide to CVISN [Reference 12].

Table 4.3-2 State CV Administration Systems Design Requirements Checklist

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	4.3.1	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IRP.	L1 CRF 1048				
F	1	Provide a Web site for a person-to-computer process.	L1; E CRF 1048				Note: Either Web or computer-to-computer interface is required for L1.
F	2	Provide a computer-to-computer automated process.	L1; E CRF 1048				DOR: P Note: Either Web or computer-to-computer interface is required for L1.
F	2a	Use EDI standards to provide a computer-to-computer automated process.	L1; E CRF 1048				EDI is recommended in the near term for computer-to-computer interfaces.
F	2b	Use XML standards to provide a computer-to-computer automated process.	E CRF 1048				
F	4.3.2	Proactively provide updates to vehicle snapshots as needed when IRP credentials actions are taken.	L1 CRF 1048, 1164				
F	1	Interface to SAFER for interstate vehicle snapshots, using available SAFER interface.	L1 CRF 1048, 1164				Today, EDI is available; plans are to also provide an XML option.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	4.3.3	Proactively provide updates to carrier snapshots as needed when IRP credentials actions are taken.	L1 CRF 1048, 1164				
F	1	Interface to SAFER for interstate carrier snapshots, using available standards	L1 CRF 1048, 1164				Today, EDI is available; plans are to also provide an XML option.
F	4.3.4	Provide IRP Clearinghouse with IRP credential application information (recaps).	L1				CRF 313 was disapproved; there are no plans for an EDI interface with the IRP CH. The IRP CH interface is specified in IRP CH documents.
F	4.3.5	Review fees billed and/or collected by a jurisdiction and the portion due other jurisdictions (transmittals) as provided by the IRP Clearinghouse.	L1				CRF 313 was disapproved; there are no plans for an EDI interface with the IRP CH. The IRP CH interface is specified in IRP CH documents.
F	4.3.6	Support electronic state-to-state fee payments via IRP Clearinghouse	L1				
F	4.3.7	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IFTA registration.	L1 CRF 1048				

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	1	Provide a Web site for a person-to-computer process.	L1; E CRF 1048				Note: Either Web or computer-to-computer interface is required for L1.
F	2	Provide a computer-to-computer automated process.	L1; E CRF 1048				Note: Either Web or computer-to-computer interface is required for L1.
F	2a	Use EDI standards to provide a computer-to-computer automated process.	L1; E CRF 1048				EDI is recommended in the near term for computer-to-computer interfaces.
F	2b	Use XML standards to provide a computer-to-computer automated process.	E CRF 1048				
F	4.3.8	Proactively provide updates to carrier snapshots as needed when IFTA credentials actions are taken or tax payments are made.	L1 CRF 1048, 1164				
F	1	Interface to SAFER for interstate carrier snapshots, using available SAFER interface.	L1 CRF 1048, 1164				Today, EDI is available; plans are to also provide an XML option.
F	4.3.9	Provide IFTA Clearinghouse with IFTA credential application information using EDI standards.	L1				
F	4.3.10	Support electronic tax filing for IFTA quarterly fuel tax returns.	L1				
F	1	Provide a Web site for a person-to-computer process.	L1; E CRF 1048				Note: Either Web or computer-to-computer interface is required for L1.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	2	Provide a computer-to-computer automated process.	L1; E CRF 1048				Note: Either Web or computer-to-computer interface is required for L1.
F	2a	Use EDI standards to provide a computer-to-computer automated process.	L1; E CRF 1048				EDI is recommended in the near term for computer-to-computer interfaces.
F	2b	Use XML standards to provide a computer-to-computer automated process.	E CRF 1048				
F	4.3.11	Provide information on taxes collected by own jurisdiction and the portion due other jurisdictions (transmittals) to the IFTA Clearinghouse using EDI standards.	L1				
F	4.3.12	Download for automated review the demographic information from the IFTA Clearinghouse using EDI standards.	L1				
F	4.3.13	Download for automated review the transmittal information from the IFTA Clearinghouse using EDI standards.	L1				
F	4.3.14	Retrieve IFTA tax rate information electronically from IFTA, Inc.	L1				
F	4.3.15	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for other credentials.	E				
F	1	Interstate carrier registration	E				
F	2	Intrastate carrier registration	E				
P	3	Vehicle title	E				

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
P	4	Intrastate vehicle registration	E					Will look at as long-term objective.
N	5	HazMat credentialing/permitting, if such credentials/permits are required by state law.	E					Florida does not issue HM permits.
F	6	Oversize/overweight permitting.	E					
	4.3.16	Proactively provide updates to vehicle snapshots as needed when credentials actions are taken.	E					
P	1	Vehicle title	E					
F	2	Intrastate vehicle registration	E					Will look at as long-term objective.
F	3	Oversize/overweight permitting.	E					
	4.3.17	Proactively provide updates to carrier snapshots as needed when credentials actions are taken.	E					
F	1	Interstate carrier registration	E					
F	2	Intrastate carrier registration	E					
N	3	HazMat credentialing/permitting, if such credentials/permits are required by state law.	E					Florida does not issue HM permits.
F	4	Oversize/overweight permitting.	E					
P	4.3.18	Allow CV operators, government-operated, or third party systems to submit one or more applications in a single transaction.	E					Need to explore impact on systems.
F	4.3.19	Provide commercial driver information to other jurisdictions via CDLIS.	L1					
P	4.3.20	Evaluate carrier safety performance prior to issuing vehicle registration renewal (i.e. support PRISM processes or equivalent).	E					Need to explore program.

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C)	CRF #	Op Test Date	IOC Date	FOC Date	Comments
P	4.3.21	Allow carriers to provide information for audits electronically.		C				
F	4.3.22	Provide titling information to other jurisdictions via NMVTIS.		C				
F	4.3.23	Provide revoked IFTA motor carrier information to other jurisdictions via STOLEN.		C				
F	4.3.24	Accept electronic credential and supporting electronic documentation, in lieu of paper versions.		C				
F	4.3.25	Proactively provide updates to driver snapshots as needed when credentials actions are taken.		C				
F	1	Interface to SAFER for driver snapshots, using available SAFER interface.		C				

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
Complete code descriptions are given in section 1.5.

4.4 State Electronic Screening Systems Design Requirements

The roadside systems involved in electronic screening consist of:

- Screening System
- Roadside Operations System
- Sensor/Driver Communications System
- Electronic Screening Enrollment (CRF 1172)

These electronic screening systems will operate at each fixed or mobile CV check station within a state. The systems perform roadside functions supporting automated carrier, vehicle, and driver identification and associated look-ups in infrastructure-supplied data for credentials and safety checks.

When building an electronic screening system, it is useful to think about the process of electronic screening enrollment as part of the process. The requirements for Electronic Screening Enrollment (ESE) appear in this section on Electronic Screening, since the enrollment would not occur unless operators wanted to participate in electronic screening. CRF 1172 authorized this change. The requirements for ESE should be considered during design of other administrative and credentialing systems.

The concepts in the following table are based on an interpretation of the guiding principles and the state of existing and emerging technologies today. The elements in this table were originally based on the Key Operational Concepts sections of the OCD [Reference 9]. Updated versions of the operational concepts are included in the CVISN Guide to Top-Level Design [Reference 13] and in the CVISN Guide to and Electronic Screening [Reference 16]. This version of the COACH reflects the updated concepts.

Table 4.4-1 Electronic Screening Operational Concepts

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Comments
F	1.	Widespread participation in electronic screening programs is encouraged.	L1	
F	2.	Jurisdictions disclose practices related to electronic screening.	L1	
P	3.	Electronic screening is provided for vehicles equipped with FHWA-specified DSRC transponders. See Reference 35.	L1	Only if they have a recall button in PrePass.
F	4.	Jurisdictions and/or e-screening programs provide a single point of contact for motor carriers to request enrollment in all jurisdictions' electronic screening programs.	L1 CRF 1172	
N	5.	If one jurisdiction or e-screening program provides a transponder to a carrier, it allows the carrier to use that transponder in other jurisdictions' e-screening programs, and in other applications such as electronic toll collection.	L1 CRF 1172	Not in PrePass
F	6.	For an enrolled carrier that has vehicles equipped with compatible transponders, jurisdictions and/or e-screening programs provide a mechanism for participation in electronic screening using those transponders.	L1 CRF 1172	
F	7.	Credentials and safety checks are conducted as part of the screening process.	L1	
F	8.	Fixed and/or mobile roadside check stations are employed for electronic clearance functions, according to the jurisdiction's needs and resources.	L1	
F	9.	Jurisdictions support a common set of screening criteria.	E	DOT: State sets criteria.
N	10.	Screening systems are interoperable with those in different jurisdictions.	E	Not in PrePass

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
 L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability
 Complete code descriptions are given in section 1.5.

The top-level requirements in the following table apply to the design of state screening-related systems. The table shows more detail about what “CVISN Level 1” means. The CVISN Level 1 requirements are marked with “L1” in the fourth column (Req Level (L1/E/C)). For an overview of CVISN Level 1, see the Introductory Guide to CVISN [Reference 12].

Table 4.4-2 State Electronic Screening Systems Design Requirements Checklist

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	4.4.1	Follow FHWA guidelines for Dedicated Short Range Communications (DSRC) equipment.	L1 CRF 1159				See the NPRM regarding DSRC in ITS CVO, Reference 35.
F	1	For the immediate future, all CVO and Border crossing projects will continue to utilize the current DSRC configuration employed by the programs. This is the "ASTM version 6" active tag.	L1 CRF 1159				The DSRC provisional standard is defined in the FHWA specification, (Reference 37).
F	2	Beginning January 1, 2001, all CVO and Border Crossing projects will use a provisional standard as described below. In addition, this provisional standard will be designed to ensure interoperability with the existing legacy equipment used in CVO that conforms to ASTM Version 6.	E CRF 1159				
F	2a	the new ASTM Physical Layer in the active mode;	E CRF 1159				Reference 32

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	2b	the existing ASTM Version 6 Data Link layer in the synchronous mode;	E CRF 1159				Reference 33
F	2c	and the IEEE 1455 Application Layer.	E CRF 1159				Reference 34
F	4.4.2	Use snapshots updated by a SAFER/CVIEW subscription in an automated process to support screening decisions.	L1 CRF 1171				
F	1	Carrier snapshots.	L1				
F	2	Vehicle snapshots.	L1				
N	3	Driver snapshots.	C				Concern about driver privacy.
F	4.4.3	Implement interoperability policies as they are developed by ITS America, the American Association of State Highway Transportation Officials, HELP, Inc., MAPS, Advantage CVO, I-95 Corridor Coalition, and the Commercial Vehicle Safety Alliance.	L1				
F	1	See AASHTO's Commercial Vehicle Electronic Screening Interoperability Policy Resolution, PR-14-97, Reference 20.	L1				
F	4.4.4	Provide electronic mainline or ramp screening for transponder-equipped vehicles, and clear for bypass if carrier & vehicle were properly identified and screening criteria were passed.	L1				

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
F	1	For transponder-equipped vehicles, identify carrier at mainline or ramp speeds.	L1				
F	2	For transponder-equipped vehicles, identify vehicle at mainline or ramp speeds.	L1				
F	3	Use WIM or weight history at mainline speed or on the ramp in making screening decisions.	L1				
F	4	Record screening event data.	E				
N	5	For transponder-equipped vehicles, identify driver at mainline or ramp speeds.	C				No database and unless same driver is always assigned to vehicle impossible to track.
N	4.4.5	Collect from the carrier a list of jurisdictions and/or e-screening programs in which it wishes to participate in electronic screening and inform those jurisdictions and/or e-screening programs.	L1 CRF 1172				Not in PrePass
N	4.4.6	Collect from the carrier a list of jurisdictions and/or e-screening programs in which each of its vehicles chooses to participate in e-screening, and inform those jurisdictions and/or e-screening programs.	L1 CRF 1172				Not in PrePass
F	4.4.7	Record transponder number and default carrier ID for each vehicle that intends to participate in e-screening	L1 CRF 1172				
N	4.4.8	Share carrier ID for each carrier that intends to participate in e-screening with other jurisdictions and/or e-screening programs as requested by the carrier.	L1 CRF 1172				Not in PrePass

Commit Level (F/P/N)	Item #	Compatibility Criteria	Req Level (L1/E/C) CRF #	Op Test Date	IOC Date	FOC Date	Comments
	1	Via SAFER snapshots	E CRF 1172				
N	4.4.9	Share transponder number and default carrier ID for each vehicle that intends to participate in e-screening with other jurisdictions, e-screening programs, or other agencies as requested by the carrier.	L1 CRF 1172				Not in PrePass
	1	Via SAFER snapshots	E CRF 1172				
F	4.4.10	Accept each qualified vehicle already equipped with a compatible transponder into your e-screening program without requiring an additional transponder.	L1 CRF 1172				
N	4.4.11	Enable the carrier to share information about the transponder that you issue with other jurisdictions, e-screening programs, or agencies.	L1 CRF 1172				Not in PrePass
F	4.4.12	Verify credentials/safety information with authoritative source prior to issuing citation.	L1				
F	4.4.13	If a vehicle illegally bypasses or leaves the CV check station, alert law enforcement for possible apprehension.	C				
F	4.4.14	Report periodically to State safety information system on the activities conducted at each station (e.g. statistics).	C				

Note: F – Full Commitment; P – Partial Commitment; N – No Commitment
L1 – CVISN Level 1; E – Enhanced Level of CVISN capability; C – Complete level of CVISN capability

Complete code descriptions are given in section 1.5.

5. REFERENCES

1. JHU/APL, *ITS/CVO CVISN Glossary*, POR-96-6997 V1.0, dated December 1998.
2. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 1 - Operational Concept and Top-Level Design Checklists*, SSD/PL-97-0236, POR-97-7067 P 1.0, *Commercial Vehicle Information Systems and Networks (CVISN) Operational and Architectural Compatibility Handbook (COACH)*, dated March 1997. The latest version is available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>
3. JHU/APL, *Updates to COACH Part 1: Chapter 5 (State), Chapter 6 (CVISN Core Infrastructure), and Chapter 7 (Carrier)*, SSD/PL-98-0017, dated January 1998.
4. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 2 - Project Management Checklists*, POR-97-7067 P2.0, (Preliminary Version), September 1999. The latest version is available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>
5. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 3 – Detailed System Checklists*, POR-97-7067 P1.0, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>
6. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 4 – Interface Specification Checklists*, POR-97-7067 D1.0, (Draft), April 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>
7. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 5 - Interoperability Test Criteria*, SSD/PL-99-0470, (Draft), dated July 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>
8. JHU/APL, *Introduction to Commercial Vehicle Information Systems and Networks (CVISN)*, POR-95-6982, V1.0, March 14, 1997.
9. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) Operational Concept Document*, (Preliminary Issue P.2), POR-96-6989, June 1996.
10. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) Architecture Specification*, (Preliminary), POR-96-6985, February 1996.

11. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) System Design Description*, POR-97-6998 V1.0, (Baseline Version), March 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
12. JHU/APL, *Introductory Guide to CVISN, POR-99-7186 P.1 (Preliminary)*, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
13. JHU/APL, *CVISN Guide to Top-Level Design, POR-99-7187, P.1*, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
14. JHU/APL, *CVISN Guide to Safety Information Exchange, POR-99-7191, D.1*, March 2000. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
15. JHU/APL, *CVISN Guide to Credentials Administration, POR-99-7192, P.1*, July 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
16. JHU/APL, *CVISN Guide to Electronic Screening, POR-99-7193, D.1*, October 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
17. Intelligent Transportation Society of America, *ITS CVO Guiding Principles*, published on the World Wide Web at <http://www.itsa.org>, last updated March 27, 1998.
18. Intelligent Transportation Society of America, *Fair Information Principles for ITS/CVO*, published on the World Wide Web at <http://www.itsa.org>, last updated January 12, 1999.
19. Intelligent Transportation Society of America, *Interim ITS/CVO Interoperability Guiding Principles*, published on the World Wide Web at <http://www.itsa.org>, last updated January 12, 1999.
20. AASHTO (American Association of State Highway Transportation Officials), *Policy Resolution P§-14-97 Commercial Vehicle Electronic Screening Interoperability*, *AASHTO Transportation Policy Book*, January 1999. The document is available on the World Wide Web at <http://www.aashto.org/>.
21. FHWA, *Commercial Vehicle Information Systems and Networks (CVISN) Model Deployment Program Request for Information*, notice in Federal Register April 11, 1996 (volume 61, number 71, 16157)
22. FHWA, *Commercial Vehicle Information Systems and Networks (CVISN) Model Deployment Program Request for Application*, notice in Federal Register July 5, 1996 (volume 61, number 130, 35300).
23. FHWA, Letter from HAS-20 to States, *Call for New CVISN States - What states are interested in CVISN Workshops*, J. Loftus e-mail dtg 981222 5:10 PM

24. *Reference Deleted*

25. ANSI ASC X12, *Electronic Data Interchange X12 Standards*, Draft Version 4, Release 3, (a.k.a. Release 4030), December 1999.
26. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) Recommendations for Common Carrier, Vehicle, Driver, and Cargo Identifiers*, SSD/PL-99-0388, June 1999.
27. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume I - IRP Credential Transactions*, ANSI ASC X12 Version 4 Release 3, POR-96-6993 D.5, dated March 2000.
28. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume II – IRP Interstate Credential Transactions*, Draft Version, POR-96-6994 D.2, December 17, 1996.
29. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume III - International Fuel Tax Agreement (IFTA) Credential Transactions*, ANSI ASC X12 Version 4 Release 3, POR-97-6996 D.4, dated March 2000.
30. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume IV - Oversize / Overweight (OS/OW) Credential Transactions*, POR-97-7068 D.3, dated March 2000.
31. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Safety and Credentials Information Exchange (Transaction Set 285)*, POR-96-6995 D.5, dated March 2000.
32. ASTM Preliminary Standard-111-98, Specification for Dedicated Short Range Communication (DSRC) Physical Layer using Microwave in the 920 to 928 MHz band, dated April 1999. For a summary of the standard, see <http://www.its.dot.gov/standard/standard.htm>.
33. ASTM Draft Standard for Dedicated, Short Range, Two-Way Vehicle to Roadside Communications Equipment, Draft 6, dated 23 February 1996.
34. IEEE Standard 1455-99, Standard for Message Sets for Vehicle/Roadside Communications, dated September 1999. For a summary of the standard, see <http://www.its.dot.gov/standard/standard.htm>.
35. The U. S. Department of Transportation, Federal Highway Administration, *Proposed Rule: Dedicated Short Range Communications In Intelligent Transportation Systems (ITS) Commercial Vehicle Operations*, 23 CFR Part 945, [FHWA Docket No. FHWA 99-5844] RIN 2125-AE63, published in Federal Register: December 30, 1999 (Volume 64, Number 250), Page 73674-73742. Available from the Federal Register Online via GPO Access, http://www.access.gpo.gov/su_docs/aces/aces140.html [DOCID:fr30de99-43]

36. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 1 - Operational Concept and Top-Level Design Checklists*, SSD/PL-97-0243, POR-97-7067 V1.0, *Commercial Vehicle Information Systems and Networks (CVISN) Operational and Architectural Compatibility Handbook (COACH)*, dated March 1999.
37. JHU/APL, *Delivery of Draft Specification for “Active Sandwich” Protocol for Dedicated Short Range Communications (DSRC) for Commercial Vehicles*, SSD-PL-99-0784, with enclosure *Draft Specification for DSRC for Commercial Vehicles, Version 0.0.1*, November 1999, dated December 1999.
38. JHU/APL, *Delivery of CVISN Electronic Credentialing Preference Survey Results*, SSD-PL-00-0408, with enclosure *Electronic Credentialing Preference Survey Results*, June 2000, dated July 2000.

Florida CVISN Top-Level Design



Appendix B: COACH, Part 3

**Intelligent Transportation Systems (ITS)
Commercial Vehicle Operations (CVO)**

**CVISN Operational and Architectural
Compatibility Handbook (COACH)
Part 3
Detailed System Checklists**

Baseline Version

POR-97-7067 V1.0

October 2000

Please note that this is a Preliminary Issue

It is important to note that this is a preliminary document. All sections included are complete and have been reviewed by JHU/APL, but not by other DOT contractors or state/federal government agencies. The purpose of this issue is to obtain comments and feedback on this document from those external organizations before a baseline version is published.

Note: This document and other CVISN-related documentation are available for review and downloading by the ITS/CVO community from the JHU/APL CVISN site on the World Wide Web. The URL for the CVISN site is: <http://www.jhuapl.edu/cvisn/>

Review and comments to this document are welcome. Please send comments to:

Ms. Sandra B. Salazar
11100 Johns Hopkins Road
Laurel, MD 20723-6099

Phone: 240-228-7610
Fax: 240-228-6149
E-Mail: sandra.salazar@jhuapl.edu

Change Summary:

This document is under configuration management by the CVISN Architecture Configuration Control Board. The list below provides a brief description of the change request forms (CRFs) processed by the board that impacted this document. Soon we hope to post the CRFs on the CVISN Web site referenced above.

References to the CRFs listed below appear in the text or tables of the document so that the reader knows how each CRF affected Version V1.0 of the document

Version V1.0 of the document incorporates revisions related to these change reports:

- CRF 313 – Disapproved (EDI interface for IRP CH)
- CRF 827 – Snapshot update views & control, esp. how SAFER & CVIEW should handle data from multiple sources
- CRF 1047 – Update CVISN to include Archived Data User Service
- CRF 1048 – Update CVISN for Web sites and XML for Credentialing
- CRF 1084 – Update Design Template and Stakeholder View
- CRF 1159 – Update DSRC references

- CRF 1164 – Clarify interface options (EDI, XML, Web, other) for Safety
- CRF 1171 – Use Snapshots for E-Screening in Automated Process
- CRF 1172 – Clarify & complete concepts and requirements for E-Screening Enrollment
- CRF 1204 – Improve format and guidance in the COACH Part 3

This Page Intentionally Blank

**CVISN Operational and Architectural Compatibility Handbook (COACH)
Part 3 – Detailed System Checklists**

Table of Contents

1.	INTRODUCTION	1
1.1	COACH Structure	1
1.2	COACH Part 3 Detailed System Checklists Description	1
1.3	Generic State CVISN System Design	2
1.4	How States Should Use This Document	5
2.	DATA MAINTENANCE REQUIREMENTS	6
3.	GENERIC DESIGN – STATE SYSTEMS	10
3.1	Description of State Safety Information Exchange and Safety Assurance System Components	11
3.2	Description of State CV Credentials Administration System Components	15
3.3	Description of State Electronic Screening System Components	19
4.	GENERIC DESIGN – CVISN CORE INFRASTRUCTURE SYSTEMS	22
5.	GENERIC DESIGN – CARRIER SYSTEMS	25
6.	REFERENCES	27

A.	APPENDIX A - ALLOCATION OF STATE SYSTEMS DESIGN REQUIREMENTS	1
A.1	Allocation of General State Systems Design Requirements	7
A.2	Allocation of State Safety Information Exchange and Safety Assurance Systems Design Requirements	13
A.3	Allocation of State CV Credentials Administration Systems Design Requirements	19
A.4	Allocation of State Electronic Screening Systems Design Requirements	29

1. INTRODUCTION

The CVISN Operational and Architectural Compatibility Handbook (COACH) provides a comprehensive checklist of what is required to conform with the Commercial Vehicle Information Systems and Networks (CVISN) operational concepts and architecture. It is intended for use by state agencies with a motor carrier regulatory function and by motor carriers.

1.1 COACH Structure

The COACH is divided into 5 parts:

- Part 1 - Operational Concept and Top-Level Design Checklists
- Part 2 - Project Management Checklists
- Part 3 - Detailed System Checklists**
- Part 4 - Interface Specification Checklists
- Part 5 - Interoperability Test Criteria

Parts 1 [Reference 2], 2 [Reference 3], and 4 [Reference 4], and 5 [Reference 5] are available at the Browse and Download Documentation; Architecture section of the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>. This is the fourth revision to the COACH Part 3 [see Reference 19 for the earlier version].

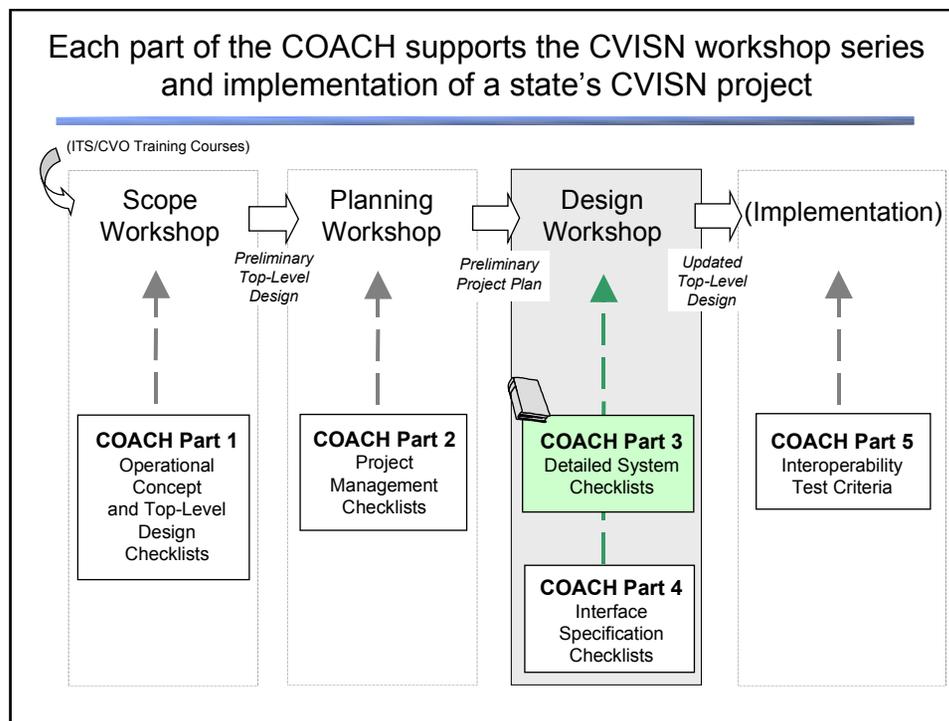


Figure 1.1-1 The COACH supports the workshops

1.2 COACH Part 3 Detailed System Checklists Description

This is Part 3. Part 3 describes the generic CVISN design.

- Data Maintenance Specifications, establishing the requirements incumbent on data “owners” to keep others informed about changes in data values [Chapter 2]
- Description of components of the generic CVISN state design [Chapter 3]
- Description of CVISN Core Infrastructure components [Chapter 4]
- Description of Carrier System components [Chapter 5]
- References [Chapter 6]
- Allocation of State System requirements to components of the generic CVISN state design [Appendix A]

Since the means of communications (e.g., network configuration, protocols supported) are usually specific to each state or to each system, readers should contact the state architect or the system manager for that information. This document is concerned primarily with the information exchanged among systems. Communications standards for vehicle-to-roadside communications are stated.

This document is used to allocate the state requirements from the COACH Part 1 to components of the state system design. The document also includes checklists for data maintenance requirements. Each state should maintain a master filled-in copy of the COACH.

1.3 Generic State CVISN System Design

Figure 1.3-1 below depicts the generic CVISN state system design template. CRF 1084 has been applied. Material in this document is based upon this generic design. The systems shown in the generic design are described in chapters 3-5. The CVISN Glossary [Reference 1] explains the acronyms. The generic design represents the main elements needed for a state to implement the CVISN architecture. Each state will adapt the generic design to accommodate their existing (legacy) systems, and to meet their own unique needs.

Use of standardized Dedicated Short Range Communications (DSRC) and either Electronic Data Interchange (EDI) or Web interfaces is required for architecture conformance. In the future, the eXtensible Markup Language (XML) may be an alternative to EDI. For safety information exchange, Web transactions may be used to communicate safety information between information systems and human users. SAFER offers access to some carrier data via a Web site. For the credential application process, person-to-computer interfaces based on the World Wide Web standards are popular and conform to the CVISN architecture. In the near term for computer-to-computer interfaces, X12 EDI is recommended.

Each state chooses whether to modify a legacy system (LM - legacy modification) to support EDI or non-EDI formats (and other new functions and interfaces), or to create a Legacy System Interface (LSI) to deal with the EDI or non-EDI-to-native form interface. Many CVISN states are implementing a mix of LSIs and LMs. Throughout this document, the generic state system design is based on choosing to modify the legacy systems (i.e., implement LMs).

In the generic design depicted here, the legacy credentials systems update the appropriate snapshot segments in the Commercial Vehicle Information Exchange Window (CVIEW) using EDI. In this design, both the Roadside Operations and the inspection system products subscribe to CVIEW to receive snapshots. The CVIEW-Roadside Operations connection is an EDI interface. The CVIEW-inspection system interface uses the “application file format” that corresponds to a file format that could be input into an EDI translator.

To achieve interoperability, the CVISN architecture calls for the use of open standards for carrier-state and state-state (via the CVISN Core Infrastructure) interfaces. Interfaces that are wholly within a state government’s control (e.g., between state agencies) are not required to use open standards. Most CVISN States have chosen to use open standards for some within-state interfaces, and have chosen to use existing custom interface agreements for others. For example, some states have chosen to implement LSIs instead of modifying their existing International Registration Plan (IRP) or International Fuel Tax Agreement (IFTA) products. They are implementing the LSIs as small applications running on the same computer as the Credentialing Interface (CI). For those states, there are no EDI interfaces between the CI and their existing IRP or IFTA systems. Some of those states have also decided that the CI will provide snapshot segment updates of credentials data to CVIEW on behalf of the IRP or IFTA systems. In this document we depict one generic design for simplicity. The generic design shown here maximizes the use of open standards. Other designs are also acceptable under the CVISN architecture. Refer to the technical volumes of the CVISN Guide series for further information [References 8-10].

Generic State System Design Template

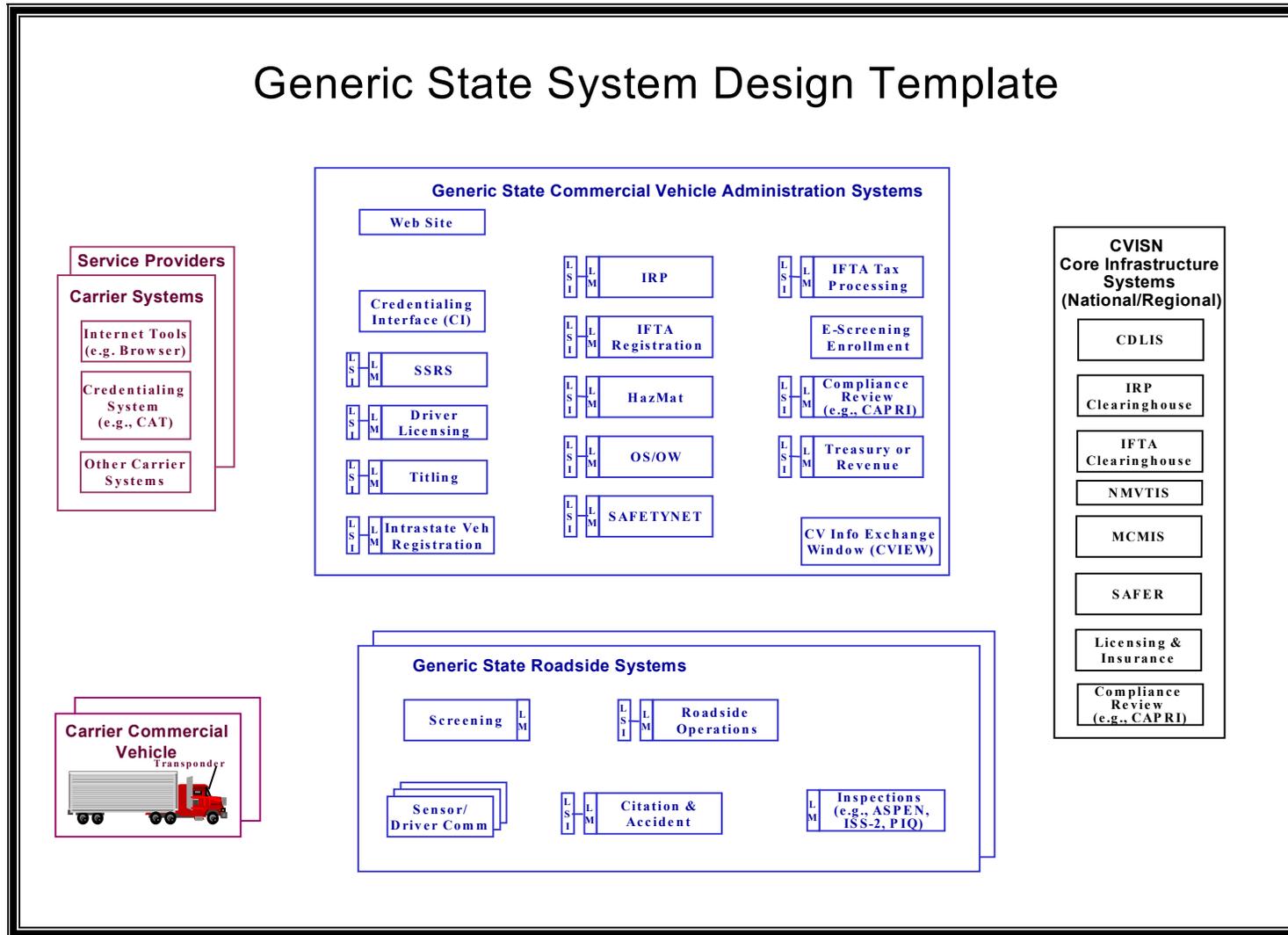


Figure 1.3-1 Generic State Design Template

1.4 How States Should Use This Document

The COACH summarizes key concepts and architectural guidelines for CVISN. This version of the COACH Part 3 focuses on topics important to states. The COACH Part 1 defines the CVISN Level 1 criteria. This document allocates the state requirements from the COACH Part 1 to specific components of the generic state CVISN design. This document also provides more information about the CVISN Core Infrastructure products and the components of the Carrier Systems. The Data Maintenance table in Chapter 2 provides guidelines for maintaining data shared across functional areas.

To gain a more complete understanding of CVISN, state planners and designers should read the Introductory Guide to CVISN [Reference 7], other parts of the COACH [References 2-5], and the CVISN System Design Description [Reference 6]. The COACH Part 2 includes checklists that support the project planning processes. The COACH Part 4 defines the interface specification requirements. The COACH Part 5 states interoperability testing criteria. The CVISN System Design Description describes system requirements related to CVISN Level 1 capabilities, the generic CVISN design, and how the elements fit together.

This version of the COACH Part 3 is intended to be a model for how states might allocate the COACH Part 1 requirements to elements of their system designs. This document will be used in the CVISN workshops.

In accordance with CRF 1204, this section has been updated to provide more guidance to the states. The instructions for completing the tables and checklists in the COACH Part 3 have been moved to the specific chapters.

States are to complete these items prior to attending the CVISN Design Workshop:

- States are to indicate their commitment to the data maintenance/update requirements in Chapter 2
- States are to map their state system components to the generic system components in Chapter 3. States should also modify the system component descriptions in this chapter to fit their specific state system design.
- The generic CVISN state design has been summarized in a series of tables in Appendix A. It is recommended that states tailor these tables to specify their state-specific system components, and to allocate their requirements to these state system components.

Chapters 4 and 5 give a little more information about the functions of each of the CVISN Core Infrastructure and Carrier systems than was provided in COACH Part 1. The chapters are provided for information only.

2. DATA MAINTENANCE REQUIREMENTS

The checklists in this chapter summarize the requirements for maintaining data and sharing updates with other CVO stakeholders. Systems should be designed to meet these criteria. If a user group has more stringent requirements, those requirements override these and should be noted in the "Comments" column.

In accordance with CRF 1204, this chapter has been updated to provide more guidance to the states. Instructions for how to complete Table 2-1 have been added to this chapter.

The "Commit" column in Table 2-1 should be used to indicate the state's commitment to the data maintenance/update requirement stated in the "Requirement for data to be maintained or updated" column. As in the COACH Part 1, the codes for commitment are defined as:

- Commit Level (F/P/N) – the state's commitment level to the item
 - Using the first column of each checklist entry, a **commitment level should be filled in** by the state. There are three possible levels of commitment:
 - (F) This rating indicates a full commitment. This level means that at least 80% of the state's systems involved in the process implied by the checklist item are compatible or are intended to be compatible with the checklist item statement.
 - (P) This rating indicates a partial commitment. This level means that between 50% and 80% of the state's systems involved in the process implied by the checklist item are compatible or are intended to be compatible with the checklist item statement.
 - (N) This rating indicates no commitment. This level means that less than 50% of the state's systems involved in the process implied by the checklist item are compatible or are intended to be compatible with the checklist statement.

If the state maintains its master copy of this document electronically, the following conventions are recommended when filling in the column to illustrate the "firmness" of the state's plan:

- *Italics type* : Tentative, not approved by the final decision makers
- Regular type : Approved by the decision makers (or supported by consensus)
- **Bold type** : Completed

For a state to be “compatible with CVISN,” it must implement selected items in Table 2-1. To distinguish those items, the CVISN project team has assigned a **compatibility requirement level** to each checklist item. As in the COACH Part 1, the codes for the "Reqs Level" column are defined as:

- (L1) This rating identifies a CVISN Level 1 compatibility requirement.
- (E) This rating indicates an enhanced level of CVISN compatibility. These items may require a little longer to complete (3-4 years).
- (C) This rating indicates a complete level of CVISN Compatibility. Satisfying all these provides complete CVISN compatibility. These items are expected to require a longer-range (5 or more years) time frame.

States are expected to focus initially on checklist items with an "L1" compatibility requirement level rating. Making a *partial commitment* indicates that the state will at least demonstrate the feasibility of that data maintenance and/or update requirement. Making a *full commitment* indicates that the state will fully implement the data maintenance and/or update requirement and be ready for the next steps.

Table 2-1. Data Maintenance & Update

Commit Level (F/P/N)	Data Need Category	Requirement for data to be maintained or updated	Reqs Level	Comments
F	1. <i>Routine snapshot segment changes</i> are those for which users can wait until the next routine snapshot update is scheduled. Routine snapshot data changes include updates related to passed inspections, compliance reviews, or credential renewals or supplements.	The authoritative source system should update the snapshot record within 24 hours of the change.	L1; C	L1 for carrier & vehicle snapshots; C for driver snapshots Legacy System -> CVIEW

Commit Level (F/P/N)	Data Need Category	Requirement for data to be maintained or updated	Reqs Level	Comments
F	2. <i>High-priority snapshot segment changes</i> are those which users need to know about immediately. High priority snapshot data changes include out-of-service (OOS) resulting from an inspection.	The source system should update the snapshot record within 30 minutes of the change.	L1; C	L1 for carrier & vehicle snapshots; C for driver snapshots ASPEN -> SAFER
F	3. <i>Snapshot subscription fulfillment</i> is the SAFER or CVIEW process for sending specified snapshot output views to users based on standing requests to do so when specified data changes.	Whenever the criteria for sending a snapshot are triggered, the snapshot system (CVIEW or SAFER) should distribute the revised snapshot within 24 hours for routine snapshot segment changes, and within 30 minutes for high-priority snapshot segment changes.	L1; C	L1 for carrier & vehicle snapshots; C for driver snapshots CVIEW -> SAFER CVIEW -> PrePass
F	4. <i>An inspection report</i> indicates the results of an inspection conducted at the roadside by a qualified inspector.	Normally, the results of an inspection using ASPEN should be reported electronically within 24 hours of being conducted. If the vehicle or driver was placed OOS, the results should be reported within 30 minutes.	L1	ASPEN will communicate directly with SAFER. CVIEW may collect the reports for long-term storage.
F	5. <i>Credential application response</i> is the response from the state to the applicant. In this context, the “response” reflects the results of evaluating the credential application.	The state system should respond to the applicant’s system within 2 hours for a correct transaction that requires no manual intervention. If manual intervention is required, the state system should respond to the applicant’s system within one business day of receipt of an electronic input.	L1	Depends on the e-commerce support for collecting payment to complete the transaction. OS/OW may require manual bridge analysis for some portion of their application.

Commit Level (F/P/N)	Data Need Category	Requirement for data to be maintained or updated	Reqts Level	Comments
F	6. <i>IRP base state agreement data</i> are those data required by other jurisdictions to understand the fees collected on their behalf. In IRP lingo, these data are exchanged via “recaps.”	The state IRP system should send recaps to the IRP Clearinghouse at least monthly.	L1	
F	7. <i>IFTA base state agreement data</i> are those data required by other jurisdictions to understand the quarterly fuel taxes collected on their behalf. In IFTA lingo, these data are called “demographic” for basic census information, and “transmittal” for tax return information.	The state IFTA system should send updated demographic and transmittal data to the IFTA Clearinghouse at least monthly.	L1	This is a long-range goal for FL and will depend on the status of the IFTA Clearinghouse and internal resources to implement the scenario.
F	8. The <i>Privacy Act of 1974</i> [Reference18] attempts to regulate the collection, maintenance, use, and dissemination of personal information by federal government agencies. Federal systems must adhere to the law. Some sections of the law apply to state and local governments as well. Additionally, some states have related laws regarding privacy and data access.	The systems affected by the Act or related statutes should incorporate procedures, protocols, and designs that support the law. The Privacy Act include sections concerning data disclosure, accounting of disclosure, access, amendment, reporting, archiving, and other activities.	L1	

3. GENERIC DESIGN – STATE SYSTEMS

In accordance with CRF 1204, this chapter has been updated to provide more guidance to the states. The new checklists in this chapter are used to map the state's system components to the generic system components. The tables that the state could use to allocate state system requirements to the components have been moved to Appendix A.

Sections 3.1 through 3.3 each include a checklist followed by paragraphs that describe each product in the generic CVISN state system design. The completed checklists will identify the state's systems components and will be used later to tailor the requirements allocation tables in Appendix A. The state should follow the procedures described here for completing the checklists and modifying the descriptions in each section.

In each checklist table, the entries in the column "System Name in Generic Design" include the components shown in the Generic State System Design for that CVISN functional area. The state should use the column "System Name in Our State" to indicate the name of the corresponding product in the state. Since the state's product may contain more or less functionality than the generic component, the state should enter one of the following values in the column "Mods in Our State versus Generic Functions":

- (+) Our state's system component will include more functionality than that described for the generic system component.
- (-) Our state's system component will include less functionality than that described for the generic system component.
- (none) Our state's system component will include the same functionality as that described for the generic system component.

Extra lines are provided in the table for the state to add state-specific system components that are not part of the generic design but are important to the state's complete system design. For example, the state may have a central data repository that is used by several processes; such a product should be added in the column "System Name in Our State".

The "Commit" column in each checklist should be used to indicate the state's commitment to implementing the system component. As in the COACH Part 1, the codes for commitment are defined as:

- Commit Level (F/P/N) – the state's commitment level to the item
 - Using the first column of each checklist entry, a **commitment level should be filled in** by the state. There are three possible levels of commitment:
 - (F) This rating indicates a full commitment. This level means that at least 80% of the functionality described for the generic system component will be included by the state's system component.

(P) This rating indicates a partial commitment. This level means that between 50% and 80% of the functionality described for the generic system component will be included by the state's system component.

(N) This rating indicates no commitment. This level means that less than 50% of the functionality described for the generic system component will be included by the state's system component.

If the state maintains its master copy of this document electronically, the following conventions are recommended when filling in the column to illustrate the “firmness” of the state’s plan:

- *Italics type* : Tentative, not approved by the final decision makers
- Regular type : Approved by the decision makers (or supported by consensus)
- **Bold type** : Completed

The "Comments" column should be used to further explain the information provided in any of the other columns.

Following each checklist table in each section are paragraphs wherein each product in the generic CVISN state systems design is described. This introductory material should be modified by the state to represent the state's CVISN system design. This material can then be used by the state in preparing the Top-Level Design presentation for the CVISN Design Workshop.

First, the state should delete the component name and description for any components that the state is not using. Next, the state should replace the generic component names with the state's own names, as identified in the checklists. Then, the state should add state-specific information to each component description. For example, if the state noted in the checklist that a particular component performs additional functions that are beyond those listed in the generic description, then the state may describe those additional functions. Finally, the state should add state-specific component names and descriptions. It is recommended that *Italics* or **Bold** type be used to highlight the state-specific functions and components.

3.1 Description of State Safety Information Exchange and Safety Assurance System Components

Table 3-1 lists the Safety Information Exchange and Safety Assurance products in the generic CVISN state system design. The state should use this checklist to map the state's specific products to the generic components and to reflect the state's specific design.

Table 3-1 State Safety Information Exchange and Safety Assurance System Components

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
F	SAFETYNET	SAFETYNET 2000	None	
F	Inspections - ASPEN	ASPEN 32 (2.0 coming)	None	
	Inspections - ISS			
	Inspections - ISS-2			
F	Inspections - PIQ	PIQ	None	
F	CVIEW	CVIEW	Depends on CVIEW implementation strategy	
F	Citation & Accident Compliance Review - CAPRI			

The paragraphs in this section describe the functions of each Safety Information Exchange and Safety Assurance product in the generic CVISN state system design. In accordance with CRF 1204, several system descriptions were updated using information from Reference 21. The state should modify the paragraphs in this section to reflect its specific component names and functionality.

SAFETYNET

This product was developed and is maintained by FMCSA. SAFETYNET, operating in every state, is used to collect safety data, analyze and edit the data, and report safety data to FMCSA's MCMIS. According to Reference 12, SAFETYNET is the state-level information management system for motor carrier safety. SAFETYNET captures inter- and intra-state driver/vehicle inspection data, accident data, carrier compliance reviews, enforcement data, and carrier identification data. Originally designed as a manual data entry system, SAFETYNET now allows electronic data collection. The system is central to successful management and operation of the Motor Carrier Safety Assistance Program (MCSAP). It contains many report-generating, prioritizing and task tracking routines. SAFETYNET 2000 is an Oracle-based client-server, Structured Query Language (SQL) database management system.

Inspections (e.g. ASPEN, ISS-2, PIQ)

Record & report safety inspections. According to Reference 12, *ASPEN* is a driver/vehicle safety inspection software package that improves the entire inspection process by providing inspectors at the roadside access to safety performance information including the most recent inspection results, the driver's CDL status (see CDLIS) and the safety performance and past safety problems of the carrier

(see ISS). ASPEN can be seen as an intelligent assistant that ensures complete and accurate data collection at the roadside. Inspectors select applicable violations from lists of possible citations and add descriptive notes as needed. The program can be customized for use by different States. ASPEN prints an inspection report on-site that is given to the driver. A copy also can be faxed to carrier management. ASPEN inspection data is electronically transferred to State information systems via CVIEW and SAFER. Optimized for use with pen-computers, ASPEN can also be run on Mobile Data Terminals and laptop computers. ASPEN's functions include:

- Interface with Roadside Operations system (to get screening data, notify when inspector available)
- Interface with CDLIS to check CDL status
- Interface to CVIEW/Data Mailbox system (directly or via Roadside Ops) to report inspections and access snapshots and safety reports
- Inspect vehicle - provide operator data entry of inspection results
- Update ASPEN internal database
- Calculate/display Inspection Selection System (ISS) value which recommends inspection based on carrier safety history

According to Reference 12, **ISS** is a standardized algorithm that uses carrier safety performance and inspection history data to rank carriers according to the relative value of conducting a vehicle inspection. The objective is to increase inspections on carriers with poor safety performance records (accidents, out-of-service defects and other safety problems) while also increasing inspections on carriers where there is little available information. ISS runs within ASPEN and also as a stand alone for Port of Entry use. Eventually it may also be used for mainline vehicle screening.

The **ISS-2** algorithm is substantially different from ISS. ISS is based on the Safety Status Measurement System (SafeStat) algorithm; ISS-2 is not. ISS-2 is computed on the same mainframe, located at the Austin Automation Center (AAC), that runs the MCMIS software; ISS scores were computed on individual laptops in the field based on safety data supplied to those units by SAFER via the subscription process. ISS-2 scores are normalized from 1 - 100, whereas the SafeStat range used by ISS is considerably larger. ISS-2 also accounts for carriers lacking sufficient data to compute a score by artificially assigning them a high score, e.g. 100, thus ensuring that vehicles for those carriers are inspected.

PIQ is an information retrieval application that allows federal and state law enforcement personnel to quickly obtain recent past vehicle safety inspections on any vehicle regardless of where the inspection was performed. PIQ executes on roadside desktop, laptop, and pen computers. It links to the SAFER system, via the SAFER Data Mailbox, to query and retrieve past inspections based on power unit plate number and state ID. These "past" inspections are saved in SAFER for a 45 day period. Using PIQ, inspection reports can be queried and retrieved at the roadside within seconds of a user's request.

CVIEW

Commercial Vehicle Information Exchange Window. This product is a spin-off of the FMCSA-developed SAFER system. It is owned by and located in a state. In CVISN Level 1, there is a requirement to implement a system called CVIEW (Commercial

Vehicle Information Exchange Window) or its equivalent for snapshot exchange within the state and to other states. The CVIEW or equivalent functions for handling the exchange of safety and credentials information within the state, and with other jurisdictions via SAFER, are listed below:

- Provide for the electronic exchange of:
 - **interstate** carrier and vehicle safety and credential data between state source systems, users, and SAFER
 - **intrastate** carrier and vehicle safety and credential data between state source systems and users
- Serve as the repository for a state-selected subset of
 - **interstate** carrier and vehicle safety and credential data
 - **intrastate** carrier and vehicle safety and credential data
- Support safety inspection data reporting & retrieval by roadside enforcement personnel
- Provide inter- and intrastate carrier and vehicle safety and credential data to the roadside to support electronic screening and other roadside operations
- Perform electronic exchange using:
 - Electronic Data Interchange (EDI) standards
 - Non-EDI standards, the selection of which is system-dependent
 - New open standard methods of information exchange (e.g., XML) as they become available and are requested by users
- Allow the general public to access data without the security risk of providing a direct connection to sensitive legacy systems

CVIEW has similar Data Mailbox facilities as SAFER to facilitate the exchange of information among state users within the state agencies.

Citation & Accident

Record citation and accident data. This product may exist in some form in some states. Generally, the product is envisioned to perform these functions:

- Enter citation data electronically
- Issue citations
- Enter accident data electronically
- Generate accident reports
- Interface to CVIEW system (directly or through Roadside Ops) to report citations and accidents and access safety reports

Compliance Review (e.g. CAPRI)

Carrier Automated Performance Review Information. Compliance Reviews are on-site reviews of carriers and hazardous material shippers that cover compliance with critical parts of the Federal Motor Carrier Safety Regulations. The software that supports the electronic capture of compliance review data is called Carrier Automated Performance Review Information (CAPRI). CAPRI

includes worksheets for collecting hours of service data, driver qualification data, and drug and alcohol compliance data. It creates preliminary carrier safety fitness rating and other reports for the motor carrier. Currently, CAPRI transmits completed compliance reviews to SAFETYNET via floppy disk transfer, or, if in a local area network environment, by storing a completed compliance review on a designated disk drive that SAFETYNET accesses directly. Future plans include being able to transfer compliance reviews from CAPRI to SAFETYNET via the SAFER Data Mailbox. This product was developed and is maintained by FMCSA. All Federal staff and most States use CAPRI software.

3.2 Description of State CV Credentials Administration System Components

Table 3-2 lists the CV Credentials Administration products in the generic CVISN state system design. The state should use this checklist to map the state's specific products to the generic components and to reflect the state's specific design.

Table 3-2 State CV Credentials Administration System Components

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
F	Web Site	Uniface?	None	Uniface for IRP, IFTA, and VR; TBD for others
F	Credentialing Interface	TBD	?	This function may be distributed among the web interfaces to the different credentials
F	IFTA Registration	IFTA	None	
F	IFTA Tax Filing	IFTA	None	
F	IRP	IRP	None	
F	Intrastate Vehicle Registration		None	
F	OS/OW			FL is in the process of procuring a new OS/OW system
	Titling			
	CDL/DL			
	Treasury System			
N	SSRS			FL is not a SSRS state

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
N	HazMat			Florida does not issue HazMat permits

The paragraphs in this section describe the functions of each CV Credentials Administration product in the generic CVISN state system design. The state should modify the paragraphs in this section to reflect its specific component names and functionality.

CRF 1048 authorized updating CVISN documents to reflect FMCSA’s new policy on credentials administration. The policy change resulted from analyzing the results of a survey about electronic credentialing interactions between motor carriers and state information systems (see Reference 38). The new policy is:

- FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface.
- FMCSA recommends that states survey their stakeholders to determine whether both interfaces would be appropriate.
- FMCSA recommends that, in the near term (over the next ~2 years), carriers and states use X12 EDI for computer-to-computer interfaces unless the state has evidence that customers support another approach.
- FMCSA encourages the exploration of XML as an alternative to EDI.

This is a policy regarding CVISN Level 1. If a state chooses to implement only a person-to-computer credentialing approach, then implementation of a computer-to-computer interface is considered an Enhanced capability. Similarly, if a state chooses to implement only a computer-to-computer credentialing approach, then implementation of a person-to-computer interface is considered an Enhanced capability. The descriptions in this section have been updated accordingly.

Web Site

State Web site support for electronic credentialing. The carrier’s credential applications will be submitted to the Web Site via an Internet browser. The Web Site would provide input screens and perform initial data checks. The Web Site would pass the application data to the Credentialing Interface, which would then route the application to the appropriate legacy system. The response from the legacy system would be returned to the carrier via the CI and Web Site.

- Provides on-line forms via a Web site
- Does initial error-checking on data entered onto forms
- Routes application data to the CI or directly to the appropriate state credentialing system
- Routes responses to the carrier

- May also archive transactions
- Provides temporary credentials, if feasible.
- May enable users to print credentials, for example, a mechanism to print once.

Credentialing Interface

The Credentialing Interface provides a convenient interface within the state to accept electronic credentialing application inputs from carriers, and to provide responses from state systems to carriers. As such, it is the focal point for credential and tax interaction with the carriers.

- Uses EDI ASC X12 standards or other format for interfaces with carriers
- Acknowledges receipt of valid EDI/non-EDI transactions
- Processes application data received from Web Site or CAT
- Archives transactions
- Does preliminary syntax checks on received transactions
- Allows for optional manual review of transactions
- Routes applications to the appropriate state credentialing system
- Routes responses to the carrier

A state may choose to extend the CI to perform some other function(s) normally allocated to another system, e.g., updating snapshot segments with credentials information.

IFTA

International Fuel Tax Agreement systems. See Reference 13. Usually split into two systems, one that handles *registration* and one that *processes fuel tax returns*. The IFTA is a registration reciprocity agreement among states of the United States and provinces of Canada that provides for payment of fuel taxes on the basis of fuel used in various jurisdictions. Carriers pay fuel taxes to the various jurisdictions in which fleet vehicles are operated by registering and filing tax returns through a base state. Only one fuel use license is issued for each carrier when registered under the Agreement. In the generic CVISN state design, in addition to the normal IFTA functions, the IFTA Registration system also provides carrier snapshot updates.

IRP

International Registration Plan systems. See Reference 14. The International Registration Plan is a registration reciprocity agreement among states of the United States and provinces of Canada that provides for payment of interstate vehicle license fees on the basis of fleet miles operated in various jurisdictions. License fees are paid to the various jurisdictions in which fleet vehicles are operated through a base state. Only one license plate and one cab card is issued for each fleet vehicle when registered under the Plan. A fleet vehicle is known as an apportionable vehicle and such vehicle, so far as registration is concerned, may be operated both

interjurisdictionally and intrajurisdictionally. In the generic CVISN state design, in addition to the normal IRP functions, the IRP system also provides carrier and vehicle snapshot updates.

Intrastate Vehicle Registration

These systems register commercial vehicles that normally operate within the state. In the generic CVISN state design, in addition to the normal intrastate vehicle registration functions, the system also provides vehicle snapshot updates.

OS/OW

Issue Oversize/Overweight permits. In the generic CVISN state design, in addition to the normal OS/OW functions, the OS/OW permitting system also provides carrier and vehicle snapshot updates.

Titling

Title new and used vehicles. In the generic CVISN state design, in addition to the normal titling functions, the Titling system will also provide vehicle snapshot updates.

CDL/DL

Issue Commercial Driver's License/ Driver's License. In the generic CVISN state design, in addition to the normal licensing functions, the system will also provide driver snapshot updates.

Treasury System

In this context, the State's Treasury system processes electronic payments. The Treasury system provides payment information to the credentialing system for which the fee/tax is paid. Various electronic payment methods are possible. States authorize electronic payment methods depending on regulations, capabilities, and experiences with individual payers.

SSRS

Single State Registration System. Carrier registration. The SSRS program was created to succeed the "bingo card" program administered by the Interstate Commerce Commission (ICC). The SSRS program is a base-State system whereby a motor carrier registers its interstate operating authority with, and provides proof of financial responsibility coverage to one State (a base-State) instead of multiple States. The base-State then distributes the collected fees to other participating States in which the motor carrier's vehicles operate. State participation in the System was limited to those States participating in the bingo card program prior to January 1991. Transportation agencies in 38 states register interstate authorities under the single state registration system (SSRS).

In the generic CVISN state design, in addition to the normal registration functions, the SSRS will also provide carrier snapshot updates.

HazMat

Hazardous Material registration and permitting. Provides for registration to carry HazMat and issues HazMat permits. In the generic CVISN state design, in addition to the normal HazMat functions, the HazMat system also provides carrier snapshot updates.

3.3 Description of State Electronic Screening System Components

Table 3-3 lists the Electronic Screening System products in the generic CVISN state system design. The state should use this checklist to map the state's specific products to the generic components and to reflect the state's specific design.

Table 3-3 State Electronic Screening System Components

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
F	Screening System	PrePass		
F	Roadside Operations	PrePass		
F	Sensor/Driver Communications	PrePass		
P	E-Screening Enrollment	PrePass		PrePass does not share transponder information

The paragraphs in this section describe the functions of each Electronic Screening System product in the generic CVISN state system design. The state should modify the paragraphs in this section to reflect its specific component names and functionality.

Each station’s design is unique because of:

- State policy & practices
- Traffic flow, volume, & number of lanes
- Available site space
- Legacy system characteristics
- Existing proprietary solutions
- Vintage of roadside and communications equipment

- Resources available for making changes

Screening System

Make pass/pull-in decision.

- Interface to sensor/driver communications system
- Interface to Roadside Operations system (get snapshot summaries, send sensor data, send screening results)
- Sort vehicles on mainline or ramp, using: sensor data, snapshot data, availability of inspector, operator configuration selections
- Output screening results to tag via DSRC (includes driver notification)
- Control screening messages and signal lights
- Configure screening based on operator control (via Roadside Operations system) data
- Track vehicle through facility via tracking loops

Roadside Operations

Process snapshots and control site traffic.

- Interface to CVIEW – get snapshot data
- Support legacy operator interfaces (Static Scale, CDLIS, NLETS, Traffic Flow)
- Interface to electronic screening (send criteria, get screening results, get sensor data, send snapshot summaries)
- Interface to report activities from other roadside systems to infrastructure, and vice versa
- On request, retrieve report data and display
- Process snapshot data into local database
- Allow operators to set/view screening criteria
- Display sensor data to operator
- Display snapshot data to operator
- Display vehicle position data to operator (e.g. mainline, ramp, scale lane, inspection area)

Sensor/Driver Communications

Process vehicle measures and communicate via DSRC with driver.

- Weigh In Motion/Automatic Vehicle Classification
- Automatic Vehicle Identification (via DSRC)
- In-cab notification (via DSRC)

- Height detectors
- Static scales
- Variable message signs
- Signal lights

E-Screening Enrollment

This system is being prototyped in a few of the CVISN Model Deployment states. It will collect and evaluate requests from carriers to participate in electronic screening. It will provide the carrier with a mechanism to enroll in multiple electronic screening programs with a single application. (This section has been enhanced in accordance with CRF 1172.)

- Support the addition or removal of carriers and vehicles from e-screening programs
- Process carrier's request for enrollment in one or more jurisdictions
- For own jurisdiction, evaluate carrier according to published criteria
- Process carrier's request for participation of vehicles in one or more jurisdictions. Collect sufficient information to correlate carrier, vehicle, and transponder.
- Update carrier snapshot to show carrier's request to participate in electronic screening in selected jurisdictions.
- Update carrier snapshot to show jurisdiction's acceptance/rejection.
- Update vehicle snapshot to show carrier's request to participate in electronic screening in selected jurisdictions.
- Update vehicle snapshot to show carrier, vehicle, and transponder IDs for jurisdictions as requested by the carrier.
- Update vehicle snapshots to show jurisdiction's acceptance/rejection of carrier that is associated with vehicle.
- Share snapshots with other jurisdictions as carrier requests.

See the CVISN Guide to Electronic Screening [Reference 10] for further information.

4. GENERIC DESIGN – CVISN CORE INFRASTRUCTURE SYSTEMS

This chapter describes CVISN Core Infrastructure Systems. This section is for information and requires no action by the state.

CDLIS

Commercial Driver License Information System. A Nationwide linkage of State driver license systems, CDLIS allows quick access to license status and violation history for any CDL driver in North America. CDLIS is used during roadside inspections to identify drivers with revoked, suspended, or bogus licenses.

IRP Clearinghouse

International Registration Plan Clearinghouse. Administration of IRP base state agreement. The IRP Clearinghouse performs these major functions:

- Accepts recaps input from jurisdictions,
- Computes balance due/owed to/from each jurisdiction,
- Facilitates monthly funds transfer, supporting EFT

For more information, contact John Mamone at IRP, Inc. 703-522-1905 or jmamone@aamva.org.

IFTA Clearinghouse

International Fuel Tax Agreement Clearinghouse. Administration of IFTA base state agreement. The IFTA Clearinghouse performs these major functions:

- Responds to standard & ad hoc queries
- Transmittal data entry screens
- Tax Matrix & Reference Table maintenance
- Accepts data (demographic & transmittal) submitted by clients (EDI)
- Provides standard reports

For more information, contact Bob McKee at IFTA, Inc. 602-839-4382 or rmckee@iftach.org.

NMVTIS

National Motor Vehicle Titling Information System. This system is being developed by the American Association of Motor Vehicle Administrators (AAMVA). The initial focus is not on commercial vehicles. It is to provide a pointer to title information for all vehicles.

MCMIS

Motor Carrier Management Information System. The system is operated by the U.S. Department of Transportation's Federal Motor Carrier Safety Administration (FMCSA). According to Reference 12, MCMIS is the national data warehouse of safety performance information on interstate (and some intrastate) motor carriers. It is the authoritative source of safety information used to drive national motor carrier safety programs and to feed other information systems. MCMIS maintains a comprehensive record of the safety performance of the motor carriers and hazardous materials shippers who are subject to the Federal Motor Carrier Safety Regulations or Federal Hazardous Materials regulations. MCMIS is currently accessed directly by Federal and State offices. Routine access to MCMIS data is provided by SAFER.

SAFER

Safety and Fitness Electronic Records system.
From Reference 15,

“The SAFER System is being developed as a component of ITS. One of its primary functions is to increase the efficiency and effectiveness of the inspection process at the roadside. The SAFER System currently provides carrier, vehicle, and driver safety information to fixed and mobile roadside inspection stations. This capability will be expanded in future releases of the software to include credential information. This will allow roadside inspectors and other potential government and private users to focus their efforts on high-risk areas; i.e., selecting vehicles and/or drivers for inspection based on the number of prior carrier inspections and its safety and credential history. As a result, inspection resources will be directed at drivers and vehicles associated with carriers with few prior inspections or poor safety/credential records, while minimizing time spent inspecting carriers with many prior inspections and good safety/credential histories. This will improve the overall cost effectiveness of the inspection process as well as provide an incentive to safe and legal carriers.

There are many other functions SAFER will support. For example, SAFER will provide data exchange support to the Performance and Registration Information Systems Management (PRISM) project which is currently conducting a feasibility study to determine if vehicle registration can be linked to carrier safety. SAFER will also provide electronic access to carrier safety information to various third party users such as shippers, insurers, vehicle rental/leasing companies, carriers, and others. . .

The primary function of the System is to provide users timely, electronic access to safety and credential data via one or more wide area network (WAN) communication links. This information will include identity data about carriers, vehicles, and drivers, summaries of past safety performance histories (inspections, accidents, and other data) and credential information.

SAFER will provide users with either a summary safety record (“snapshot”), or a more detailed report. Two such reports are the carrier profile and vehicle/driver inspection reports. The System will support on-line query and response for snapshot and report information. It will allow users to request, via subscriptions, that specific snapshots or reports are sent to them automatically when

substantial change in the data occurs. Users will be also able to specify the types of change that triggers transmission of subscription requests. . .

The SAFER system will also support maintenance operations, ensure data currency, provide backup and security protection, track user services and where appropriate, bill users for data exchange services.”

One component of the SAFER system is its data mailbox facility. The data mailbox facility provides a simple and universal means of transferring data between State and Federal law enforcement officers and the various information systems.

Licensing & Insurance

Register financial responsibility for interstate carriers. The former Interstate Commerce Commission’s (ICC) Licensing and Insurance (L&I) system maintains a comprehensive record of the financial responsibility of motor carriers in order to ensure that they meet the minimum insurance requirements for the activities in which they are engaged. The system is now maintained and operated by the FMCSA. If a motor carrier desires to engage in an activity covered by the financial responsibility regulations, it must provide proof of proper insurance coverage. The carrier’s detailed insurance information is maintained in the L&I system along with indicators of its over-all status. When the carrier’s insurance profile changes (for instance, when an insurance policy is canceled) the insurance provider informs FMCSA and the system is updated. The L&I information is provided to the public through a variety of mechanisms, including telephone response systems and the SAFER web page.

Compliance Review (e.g. CAPRI)

Carrier Automated Performance Review Information. Compliance Reviews are on-site reviews of carriers and hazardous material shippers that cover compliance with critical parts of the Federal Motor Carrier Safety Regulations. The software that supports the electronic capture of compliance review data is called Carrier Automated Performance Review Information (CAPRI). CAPRI includes worksheets for collecting hours of service data, driver qualification data, and drug and alcohol compliance data. It creates preliminary carrier safety fitness rating and other reports for the motor carrier. Currently, CAPRI transmits completed compliance reviews to SAFETYNET via floppy disk transfer, or, if in a local area network environment, by storing a completed compliance review on a designated disk drive that SAFETYNET accesses directly. Future plans include being able to transfer compliance reviews from CAPRI to SAFETYNET via the SAFER Data Mailbox. This product was developed and is maintained by FMCSA. All Federal staff and most States use CAPRI software.

5. GENERIC DESIGN – CARRIER SYSTEMS

The chapter describes Carrier Systems. This section is for information and requires no action by the state.

Credentialing System (e.g. CAT)

Apply for and receive responses about credentials; file fuel tax returns. A stand-alone Carrier Automated Transactions (CAT) system is one possible design solution. Another is a “CAT Module” that is integrated into a larger freight and fleet management system (FMS). The credentialing system performs such functions as:

- Data entry screens for credential applications & fuel tax filing
- Validate application
- Specify payment method
- Get latest fuel tax tables
- Compute fees (some, not all)
- Print applications
- Translate to/from EDI/non-EDI transaction
- Initiate payments through banks (future)
- Send transactions
- Receive transactions
- Acknowledge transactions
- Print credentials, if authorized
- Archive transactions

Internet tools (e.g. Browser)

Via Internet browser, access governmental or private Web sites to apply for and receive responses about credentials, file fuel tax returns, and perform other CV-related functions. CVISN states are exploring Internet-based credentialing solutions. See the description under Web Site in Chapter 3.

Other Carrier Systems

Other elements of fleet and freight management. Carriers have many systems to help them do business. To date, no specific electronic State or CVISN Core Infrastructure interfaces with these carrier activities have been defined. The applications address activities in such areas as:

- Business Operations
 - Accounting & finance
 - Purchasing
 - Billing
 - Human resources & payroll
 - Asset management
 - Management information
 - Planning & forecasting
- Customer Service
 - Sales
 - Scheduling
 - Load matching
 - Order processing
 - Shipment inquiry
- Fleet Management
 - Routing & dispatch
 - Equipment ID & tracking
 - Shipment ID & tracking
 - Driver management
 - Maintenance
 - Safety management

6. REFERENCES

1. JHU/APL, *ITS/CVO CVISN Glossary*, POR-96-6997 V1.0, dated December 1998.
2. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 1 - Operational Concept and Top-Level Design Checklists*, SSD/PL-99-0243, POR-97-7067 V 2.0, dated August 2000. The latest version will be available on the JHU/APL CVISN website <http://www.jhuapl.edu/cvisn/>.
3. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 2 - Project Management Checklists, POR-97-7067 P2.0, (Preliminary Version)*, September 1999. The latest version is available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>.
4. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 4 – Interface Specification Checklists, POR-97-7067 D1.0, (Draft)*, April 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
5. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 5 - Interoperability Test Criteria, SSD/PL-99-0470, (Draft), dated July 1999*. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
6. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) System Design Description*, POR-97-6998 V1.0, (Baseline Version), March 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
7. JHU/APL, *Introductory Guide to CVISN, POR-99-7186 P.1 (Preliminary)*, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
8. JHU/APL, *CVISN Guide to Safety Information Exchange, POR-99-7191, D.1*, March 2000. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
9. JHU/APL, *CVISN Guide to Credentials Administration, POR-99-7192, P.2*, August 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>.
10. JHU/APL, *CVISN Guide to Electronic Screening, POR-99-7193, D.1*, October 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
11. JHU/APL, *CVISN Guide to Top-Level Design, POR-99-7187, P.1*, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
12. Carol Gore, Federal Highway Administration Office of Motor Carriers - Field Systems Group (FSG) in Lakewood, CO, <http://www.inspector.org/FMCSAfsfg1.htm>, a site maintained by the International Inspector's Competition.

13. IFTA Articles of Agreement, last updated October 1998. Available from the IFTA Clearinghouse at their World Wide Web site <http://www.iftach.org/Manual1.htm>.
14. INTERNATIONAL REGISTRATION PLAN, INC. with official commentary, August 22, 1994. Available from IRP, Inc. at their World Wide Web site <http://www.aamva.org/IRP/index.html>.
15. JHU/APL, *SAFER User and System Requirements Document, draft Version 1.6*, SSD/PL-98-0503, September 1998. The latest version will be available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>.
16. The U. S. Department of Transportation, Federal Highway Administration, *Proposed Rule: Dedicated Short Range Communications In Intelligent Transportation Systems (ITS) Commercial Vehicle Operations*, 23 CFR Part 945, [FMCSA Docket No. FMCSA 99-5844] RIN 2125-AE63, published in Federal Register: December 30, 1999 (Volume 64, Number 250)], Page 73674-73742. Available from the Federal Register Online via GPO Access, http://www.access.gpo.gov/su_docs/aces/aces140.html [DOCID:fr30de99-43].
17. AASHTO (American Association of State Highway Transportation Officials), *Policy Resolution PR-14-97 Commercial Vehicle Electronic Screening Interoperability*, *AASHTO Transportation Policy Book*, January 1999. The document is available on the World Wide Web at <http://www.aashto.org/>.
18. The Privacy Act of 1974, 5 U.S.C. § 552a (1994 & Supp. II 1996) (amended 1997, 5 U.S.C.A. § 552a (West Supp. 1998)), which became effective on September 27, 1975, can generally be characterized as an omnibus "code of fair information practices" which attempts to regulate the collection, maintenance, use, and dissemination of personal information by federal government agencies. An overview of the Privacy Act of 1974, prepared in September 1998 by the Office of Information and Privacy in coordination with the Office of Management and Budget is available on the Web at http://www.usdoj.gov/04foia/04_7_1.html.
19. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 3 – Detailed System Checklists, POR-97-7067 P1.0*, May 1999.
20. JHU/APL, Delivery of CVISN Electronic Credentialing Preference Survey Results, SSD-PL-00-0408, with enclosure Electronic Credentialing Preference Survey Results, June 2000, dated July 2000. This document is available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>.
21. FMCSA Field Systems Group, System Overview page of http://fmcsa-fsg.dot.gov/system_overview.htm.

A. APPENDIX A - ALLOCATION OF STATE SYSTEMS DESIGN REQUIREMENTS

Tables in Chapter 4 of the COACH Part 1 listed the top-level requirements for the design of state systems in four categories:

- General
- Safety Information Exchange and Safety Assurance
- CV Credentials Administration
- Electronic Screening

In this chapter, the generic CVISN state design is summarized in a series of checklist tables, each of which corresponds to a table from COACH Part 1. In accordance with CRF 1204, this chapter has been updated to provide more guidance on how to use these tables. These tables were formerly included in Chapter 3.

The first and second columns ("Item #" and "Compatibility Criteria") in each table come from the COACH Part 1 Chapter 4 tables; these are the top-level requirements. The remaining columns correspond to components of the generic state design. The compatibility requirement level (L1, E, or C) in a cell indicates that the compatibility criterion is fulfilled in part or in whole by that component of the generic CVISN state design, and in what timeframe the criterion is expected to be implemented. If the item has been changed since the last revision, the next to last column indicates the Change Request Form (CRF) number for the CRF that triggered the document update. A list of all CRFs incorporated in this revision is included on the back of the title page. The last column provides a place for state-specific comments.

The columns of the checklist tables in this chapter must be modified by the state before they can be completed. In its own version of this document, each state should use the state-specific product names in the columns and/or add/delete design component columns. The completed checklists in Tables 3-1 through 3-3 of Chapter 3 contain the list of state-specific system components that should be used to modify the tables in this chapter.

Here is an example of how a state might lay out the columns. Suppose that the state's completed Tables 3-1 through 3-3 are as shown in Figures A-1.1 through A-1.3 below:

Figure A-1.1 Example of Completed Table 3-1 State Safety Information Exchange and Safety Assurance System Components

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
F	SAFETYNET	SAFETYNET	none	
F	Inspections - ASPEN	ASPEN	none	
	Inspections - ISS			
	Inspections - ISS-2			
	Inspections - PIQ			
F	CVIEW	CVIEW	none	
	Citation & Accident Compliance Review - CAPRI			

Figure A-1.2 Example of Completed Table 3-2 State CV Credentials Administration System Components

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
F	Web Site	Web Site	-	Will not enable users to print credentials
F	Credentialing Interface	Credentialing Interface	+	Sends snapshots to CVIEW for IFTA and IRP check flag updates
F	IFTA Registration	IFTA Registration	-	Will not provide snapshot updates
F	IFTA Tax Filing	IFTA Tax Filing	none	
F	IRP	MIRP	-	Will not provide snapshot updates
F	Intrastate Vehicle Registration	Titling and Registration	+	Same system for titling and registration
	OS/OW			
F	Titling	Titling and Registration		
	CDL/DL			

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
	Treasury System			
	SSRS			
	HazMat			
		MVA database		Data repository for all CV credentials administration processes

Figure A-1.3 Example of Table 3-3 State Electronic Screening System Components

Commit Level (F/P/N)	System Name in Generic Design	System Name in Our State	Mods in Our State versus Generic Functions (+, -, none)	Comments
F	Screening System	Screening System	none	
F	Roadside Operations	Roadside Operations	none	
F	Sensor/Driver Communications	Sensor/Driver Communications	none	
F	E-Screening Enrollment	E-Screening Enrollment	none	

Note that two CV credentials administration components have been combined (Titling and Registration) and that a new component has been added (MVA Database).

Next, relabel the columns in the checklist tables (tables A.1-1 through A.4-1) and delete the columns the state is not using.

Figure A-1.4 Example of Generic Requirements Allocation Checklist

Item #	Compatibility Criteria	SAFETYNET	Inspections	CVIEW	Citation & Accident	Compliance Review	Web Site	Credentialing Interface	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Titling	CDL/DL	Treasury System	SSRS	HazMat	Screening System	Roadside Operations	Sensor/Driver Comm	E-Screening Enrollment	CRF #	Comments
A.1.1	Adopt standard identifiers for carriers, vehicles, drivers, and transponders to support information exchange.	L1	L1	L1	F	L1	C	L1	L1	L1	L1	C	F	F	F		F	F	L1	L1	L1	L1		

The generic layout shown in Figure A-1.4 is replaced by a specific state layout, as shown in Figure A-1.5.

Figure A-1.5 Example of State-Specific Requirements Allocation Checklist

Item #	Compatibility Criteria	SAFETYNET	ASPEN	CVIEW	Web Site	Credentialing Interface	IFTA Registration	IFTA Tax Filing	MIRP	Titling and Registration	MVA Database	Screening System	Roadside Operations	Sensor/Driver Comm	E-Screening Enrollment	CRF #	Comments
A.1.1	Adopt standard identifiers for carriers, vehicles, drivers, and transponders to support information exchange.	L1	L1	L1	C	L1	L1	L1	L1	C	E	L1	L1	L1	L1		

The state may use the Comments column for many reasons, such as to clarify what functions are performed by each marked component if a row implies support from multiple components or to qualify the compatibility criteria statement. This is shown in Figure A-1.6.

Figure A-1.6 Example of use of Comments Column in Generic Requirements Allocation Checklist

Item #	Compatibility Criteria	SAFETYNET	ASPEN	CVIEW	Web Site	Credentialing Interface	IFTA Registration	IFTA Tax Filing	MIRP	Titling and Registration	MVA Database	Screening System	Roadside Operations	Sensor/Driver Comm	E-Screening Enrollment	CRF #	Comments
A.4.4	Provide electronic mainline or ramp screening for transponder-equipped vehicles, and clear for bypass if carrier & vehicle were properly identified and screening criteria were passed.												L1	L1	L1		
1	For transponder-equipped vehicles, identify carrier at mainline or ramp speeds.												L1	L1	L1		
2	For transponder-equipped vehicles, identify vehicle at mainline or ramp speeds.												L1	L1	L1		
3	Use WIM or weight history at mainline speed or on the ramp in making screening decisions.												L1	L1	L1		Will use WIM, not weight history.

The "compatibility requirement level" codes in each column should be marked by the state in some way to reflect the "firmness" of the state's plans. If the state maintains its master copy of this document electronically, the following font conventions are recommended:

- *Italics type* : Tentative, not approved by the final decision makers
- Regular type : Approved by the decision makers (or supported by consensus)
- **Bold type** : Completed

A.1 Allocation of General State Systems Design Requirements

The general state systems design requirements are allocated to all the systems that support the functions described by the compatibility criteria in Table A.1-1.

CRF 1048 authorized updating CVISN documents to reflect FMCSA's new policy on credentials administration. The policy change resulted from analyzing the results of a survey about electronic credentialing interactions between motor carriers and state information systems (see Reference 20). The new policy is:

- FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface.
- FMCSA recommends that states survey their stakeholders to determine whether both interfaces would be appropriate.
- FMCSA recommends that, in the near term (over the next ~2 years), carriers and states use X12 EDI for computer-to-computer interfaces unless the state has evidence that customers support another approach.
- FMCSA encourages the exploration of XML as an alternative to EDI.

This is a policy regarding CVISN Level 1. If a state chooses to implement only a person-to-computer credentialing approach, then implementation of a computer-to-computer interface is considered an Enhanced capability. Similarly, if a state chooses to implement only a computer-to-computer credentialing approach, then implementation of a person-to-computer interface is considered an Enhanced capability. The tables in this section have been updated accordingly.

The state should replace the component columns with the columns from its own layout, as described above, before completing the checklist.

Table A.1-1 Allocation of General State Systems Design Requirements Checklist

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.1.1	Adopt standard identifiers or carriers, vehicles, drivers, and transponders to support information exchange.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
1	Adopt standard identifiers for interstate carrier, vehicle, driver, and transponder.	L1 [F]	L1 [F]	L1 [F]	E	C	L1 [F]	L1 [F]	L1 [F]		E	L1 [F]	L1 [F]	L1 [F]	E	E	E	E	E		
2	Adopt standard identifiers for intrastate carrier, vehicle, driver, and transponder.	C	C	C	C	C				C	C	C	C	C	C	E	E	E	E		
A.1.2	Use the World Wide Web for person-to-computer interactions between private			L1 [N]	C	C	L1 [F]	L1 [F]	L1 [F]											1048 1164	Public access to CVIEW will be mediated by the individual credentialing

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	citizens and state information systems.																				systems
A.1.3	Use open standards for computer-to-computer exchange of information with other jurisdictions and with the public.			L1; C [P]	C	C	L1 [P]	L1 [P]	L1 [P]											1048 1164	Public access to credentialing systems will be via the Web. There will be no public access to CVIEW. Computer-to-computer transactions will be used to exchange information with other jurisdictions.
1	Use ANSI X12 EDI standards for transactions between state information systems and private systems (CV operators, insurance companies, etc.).																				

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
2	Use ANSI X12 EDI standards for transactions between state information systems and CVISN Core Infrastructure systems, where available.			L1 [F]	C		L1 [F]	L1 [F]	L1 [F]												
3	Use XML standards for transactions between state information systems and private systems (CV operators, insurance companies, etc.) (contingent on demonstration of feasibility).		C	C	C	C															
A.1.4	Ensure that all information transfers, fee payments, and money transfers are authorized and	L1 [F]	L1 [F]	L1 [F]	C	C	L1 [F]	L1 [F]	L1 [F]	E	E	L1 [F]	L1 [F]	L1 [F]	E	E	E	E	E		

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	secure.																				
A.1.5	Exchange safety and credentials data electronically within the state to support credentialing, safety, and other roadside functions. Where useful, exchange snapshots.	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X		
1	Data for interstate carriers	L1 [F]	L1 [F]	L1 [F]	C	C	L1 [F]	L1 [F]	L1 [F]			L1	L1		E	E	E		E		Florida participates in the PrePass system so the exchange of data electronically to support mainline electronic screening will not be “within” state. Credentials and safety information

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
																					will not be considered as part of the Ag/BOL operation.
2	Data for interstate vehicles	L1 [F]	L1 [F]	L1 [F]	C				L1 [F]		E	L1	L1		E	E	E		E		Florida participates in the PrePass system so the exchange of data electronically to support mainline electronic screening will not be “within” state. Credentials and safety information will not be considered as part of the Ag/BOL operation.
3	Data for intrastate carriers	E	E	E	C							E	E		E	E	E		E		Florida participates in the PrePass system so the exchange of data electronically to

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
																					support mainline electronic screening will not be “within” state. Credentials and safety information will not be considered as part of the Ag/BOL operation.
4	Data for intrastate vehicles	E	E	E	C					E	E	E	E		E	E	E		E		Florida participates in the PrePass system so the exchange of data electronically to support mainline electronic screening will not be “within” state. Credentials and safety information will not be considered as part of the Ag/BOL operation.

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 / 2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System - PrePass	Roadside Operations - PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
5	Data for drivers	C	C	C	C							C	C			E	E				
A.1.6	Demonstrate technical interoperability by performing Interoperability Tests.	L1 [F]	L1 [F]	L1 [F]	C	C	L1 [F]	L1 [F]	L1 [F]	E	E	L1 [F]	L1 [F]	L1 [F]	E	E	E	E	E		
A.1.7	Support electronic payments.					C	E	E	E	E	E				E				E		
A.1.8	Receive, collect, and archive relevant CVO data for historical, secondary, and non-real-time uses.					C	E	E	E	E	E				E				E	1047	

This Page Intentionally Blank

A.2 Allocation of State Safety Information Exchange and Safety Assurance Systems Design Requirements

Requirements from the COACH Part 1 Table 4.2-1 are allocated to specific products in Table A.2-1 below. The state should replace the component columns with the columns from its own layout, as described above, before completing the checklist.

Table A.2-1 Allocation of State Safety Information Exchange and Safety Assurance Systems Design Requirements Checklist

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments	
A.2.1	Use ASPEN (or equivalent) at all major inspection sites.		L1 [F]																			
1	Select vehicles and drivers for inspection based on availability of inspector, standard inspection selection system (ISS), vehicle measures, and random process, as statutes permit.		L1 [F]									L1 [F]	L1 [F]			E	E					
2	Report interstate inspections to MCMIS via SAFETYNET.	L1 [P]	L1 [F]	L1 [N]																		Interstate inspection results will be transferred to MCMIS using the existing process— CVIEW will not be

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
																					involved. The report will be sent from ASPEN to SAFER (via CDPD). The results will then be downloaded to SAFETYNET and CVIEW from SAFER.
3	Report intrastate inspections to SAFETYNET.	L1 [F]	L1 [F]	L1 [N]																	
4	Submit interstate and intrastate inspections for 45-day storage to SAFER.		L1 [F]	L1 [N]																	Interstate inspection results will be transferred to MCMIS using the existing process— CVIEW will not be involved. The report will be sent from ASPEN to SAFER (via CDPD). The results will then be downloaded to SAFETYNET and CVIEW from

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
																					SAFER.
5	Periodically check OOS orders issued in the state to focus enforcement and safety assurance activities.	E																			
6	To assist in inspection, use DSRC to retrieve summary vehicle safety sensor data, if driver allows and vehicle is properly equipped.		C											C				E			
7	To assist in inspection, use DSRC to retrieve driver's daily log, if driver allows and vehicle is properly equipped.		C											C				E			Florida has concerns about driver privacy
8	Use electronically-generated driver's daily log, if driver offers as an alternative to a manually-maintained log during an		C											C				E			

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	inspection.																				
A.2.2	SAFETYNET 2000 submits interstate and intrastate inspections reports to SAFER.	L1 [N]																			Interstate inspection results will be transferred to MCMIS using the existing process— CVIEW will not be involved. The report will be sent from ASPEN to SAFER (via CDPD). The results will then be downloaded to SAFETYNET and CVIEW from SAFER.
A.2.3	Maintain snapshots (or equivalent information) for operators based in the state and make available to within-state information systems			E																827	

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	and users.																				
1	For any given snapshot, there is only one authoritative source (or group of authoritative sources, such as ASPEN units) for each field in that snapshot.			E																827	
2	Allow only the authoritative source to update a snapshot data field, with the following exception: • A “super user” can update any field. An audit trail should be maintained to record super user updates.			E																827	
3	Validate the sender’s identity through some industry-standard means (account ID, IP address, password,			E																827	

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	security keys, . . .).																				
4	Reject updates attempted by any system other than the authoritative source or a super user with a code explaining why. The rejection transaction should be returned to the sender in a timely fashion. The rejection should be logged for the snapshot system administrator to review.			F																827	
A.2.4	Use CAPRI (or equivalent) for compliance reviews.																				
1	Report interstate compliance reviews to MCMIS via SAFETYNET.	L1 [N]																			Florida normally only conducts intrastate compliance reviews
A.2.5	Collect, store, analyze, and distribute citation data electronically.	L1, C [F]		C	C																C - Report to SAFETYNET 2000 via CVIEW and

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
																					SAFER Data Mailbox
1	Report citations for interstate operators to MCMIS via SAFETYNET.	L1, C [F]		C	C																C - Report to SAFETYNET 2000 via CVIEW and SAFER Data Mailbox
A.2.6	Collect, store, analyze, and distribute crash data electronically.	L1, C [F]		C	C																C - Report to SAFETYNET 2000 via CVIEW and SAFER Data Mailbox
1	Report interstate crashes as required to MCMIS via SAFETYNET.	L1, C [F]		C	C																C - Report to SAFETYNET 2000 via CVIEW and SAFER Data Mailbox
A.2.7	Compute carrier safety risk rating for intrastate carriers based on safety data collected.	E																			

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32 /2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm - PrePass	E-Screening Enrollment - PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments	
A.2.8	Identify high risk drivers based in the state through regular performance evaluation of various factors such as license status, points, and inspections.	C																				

A.3 Allocation of State CV Credentials Administration Systems Design Requirements

Requirements from the COACH Part 1 Table 4.3-2 are allocated to specific products in Table A.3-1 below. The state should replace the component columns with the columns from its own layout, as described above, before completing the checklist.

CRF 1048 authorized updating CVISN documents to reflect FMCSA's new policy on credentials administration. The policy change resulted from analyzing the results of a survey about electronic credentialing interactions between motor carriers and state information systems (see Reference 38). The new policy is:

- FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface.
- FMCSA recommends that states survey their stakeholders to determine whether both interfaces would be appropriate.
- FMCSA recommends that, in the near term (over the next ~2 years), carriers and states use X12 EDI for computer-to-computer interfaces unless the state has evidence that customers support another approach.
- FMCSA encourages the exploration of XML as an alternative to EDI.

This is a policy regarding CVISN Level 1. If a state chooses to implement only a person-to-computer credentialing approach, then implementation of a computer-to-computer interface is considered an Enhanced capability. Similarly, if a state chooses to implement only a computer-to-computer credentialing approach, then implementation of a person-to-computer interface is considered an Enhanced capability. The tables in this section have been updated accordingly.

When building a credentialing system, it is useful to think about the process of electronic screening enrollment as part of the design criteria. The allocation of requirements for Electronic Screening Enrollment have been moved to the section on Electronic Screening, since the enrollment would not occur unless operators wanted to participate in electronic screening. CRF 1172 authorized this change.

Table A.3-1 Allocation of State CV Credentials Administration Systems Design Requirements Checklist

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.3.1	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IRP.			L1 [F]		L1 [F]			L1 [F]											1048	
1	Provide a Web site for a person-to-computer process.			L1 [N]		L1 [F]			L1 [F]											1048	Public access to CVIEW will be mediated by the individual credentialing systems.
2	Provide a computer-to-computer automated process.			L1 [N]					L1 [N]											1048	DOR accepts the BOL via computer-to-computer but not for credentials. Computer-to-computer transactions for credentials will be considered as part

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
																					of the Florida Electronic Credentialing Feasibility Study
2a	Use EDI standards to provide a computer-to-computer automated process.			L1 [N]					L1 [N]											1048	Computer-to-computer credential transactions are not currently within Florida's design
2b	Use XML standards to provide a computer-to-computer automated process.			E					C											1048	
A.3.2	Proactively provide updates to vehicle snapshots as needed when IRP credentials actions are taken.			L1 [F]					L1 [F]											1048 1164	
1	Interface to SAFER for interstate vehicle snapshots, using available SAFER interface.			L1 [F]																1048 1164	

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.3.3	Proactively provide updates to carrier snapshots as needed when IRP credential actions are taken.			L1 [F]					L1 [F]											1048 1164	
1	Interface to SAFER for interstate carrier snapshots, using available standards			L1 [F]																1048 1164	
A.3.4	Provide IRP Clearinghouse with IRP credential application information (recaps).								L1 [F]											313	
A.3.5	Review fees billed and/or collected by a jurisdiction and the portion due other jurisdictions (remittance netting) as provided by the IRP Clearinghouse.								L1 [F]											313	
A.3.6	Support electronic state-to-state fee payments via IRP Clearinghouse.								L1 [F]												

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.3.7	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for IFTA registration.			L1 [F]		L1 [F]	L1 [F]													1048	
1	Provide a Web site for a person-to-computer process.			L1 [F]		L1 [F]	L1 [F]													1048	
2	Provide a computer-to-computer automated process.			L1 [N]			L1 [N]													1048	DOR accepts the BOL via computer-to-computer but not for credentials. Computer-to-computer transactions for credentials will be considered as part of the Florida Electronic Credentialing Feasibility Study
2a	Use EDI standards to provide a computer-to-			L1 [N]			L1 [N]													1048	Computer-to-computer credential

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	computer automated process.																				transactions are not currently within Florida's design
2b	Use XML standards to provide a computer-to-computer automated process.			E			C													1048	
A.3.8	Proactively provide updates to carrier snapshots as needed when IFTA credentials actions are taken or tax payments are made.			L1 [F]			L1 [F]	L1 [F]												1048 1164	
1	Interface to SAFER for interstate carrier snapshots, using available SAFER interface.			L1 [F]																1048 1164	
A.3.9	Provide IFTA Clearinghouse with IFTA credential application information using EDI standards.						L1 [F]														
A.3.10	Support electronic tax filing for IFTA quarterly fuel tax returns.			L1 [F]	L1 [F]		L1 [F]													1048	

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
1	Provide a Web site for a person-to-computer process.			L1 [N]		L1 [F]		L1 [F]												1048	Public access to CVIEW will be mediated by the individual credentialing systems.
2	Provide a computer-to-computer automated process.			L1 [N]				L1 [N]												1048	DOR accepts the BOL via computer-to-computer but not for credentials. Computer-to-computer transactions for credentials will be considered as part of the Florida Electronic Credentialing Feasibility Study
2a	Use EDI standards to provide a computer-to-computer automated process.			L1 [N]				L1 [N]												1048	Computer-to-computer credential transactions are not currently within Florida's design
2b	Use XML standards to provide a computer-to-			E				C												1048	

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	computer automated process.																				
A.3.11	Provide information on taxes collected by own jurisdiction and the portion due other jurisdictions (transmittals) to the IFTA Clearinghouse using EDI standards.						L1 [F]														
A.3.12	Download for automated review the demographic information from the IFTA Clearinghouse using EDI standards.						L1 [F]														
A.3.13	Download for automated review the transmittal information from the IFTA Clearinghouse using EDI standards.						L1 [F]														
A.3.14	Retrieve IFTA tax rate information electronically from IFTA, Inc.						L1 [F]														

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.3.15	Support electronic credentialing (electronic submission of applications, evaluation, processing, and application response) for other credentials.			E		C				E	E										
1	Interstate carrier registration			E		C															
2	Intrastate carrier registration			E		C															
3	Vehicle title			E		C															Titling is not part of Florida's CVISN Program.
4	Intrastate vehicle registration			E		C				E											Intrastate vehicle registration currently is not part of Florida's CVISN Program.
5	HazMat credentialing/permitting, if such credentials/permits are required by state law.			E		C															Florida does not issue hazardous material permits or credentials.
6	Oversize/overweight			E		C					E										

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	permitting.																				
A.3.16	Proactively provide updates to vehicle snapshots as needed when credentials actions are taken.			E						E	E										
1	Vehicle title			E																	Titling is not part of Florida's CVISN Program.
2	Intrastate vehicle registration			E						E											Intrastate vehicle registration currently is not part of Florida's CVISN Program.
3	Oversize/overweight permitting.			E							E										
A.3.17	Proactively provide updates to carrier snapshots as needed when credentials actions are taken.			E							E										
1	Interstate carrier registration			E																	
2	Intrastate carrier registration			E																	

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
3	HazMat credentialing/permitting, if such credentials/permits are required by state law.			F																	Florida does not issue hazardous material permits or credentials.
4	Oversize/overweight permitting.			F							E										
A.3.18	Allow CV operators, government-operated, or third party systems to submit one or more applications in a single transaction.					C	E		E	E	E										Expect to handle multiple transactions for a single kind of credential (e.g. IRP).
A.3.19	Provide commercial driver information to other jurisdictions via CDLIS.																				
A.3.20	Evaluate safety performance prior to issuing credentials (i.e. support PRISM processes or equivalent).			E			E		E	E	E				E					E	Florida is evaluating the PRISM Program.
A.3.21	Allow carriers to provide information for audits electronically.							C	C	C											

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.3.22	Provide titling information to other jurisdictions via NMVTIS.																				
A.3.23	Provide revoked IFTA motor carrier information to other jurisdictions via STOLEN.						C														
A.3.24	Accept electronic credential and supporting electronic documentation, in lieu of paper versions.		C	C	C		C		C	C	C		C				E		E		
A.3.25	Proactively provide updates to driver snapshots as needed when credentials actions are taken.			C																	
1	Interface to SAFER for driver snapshots, using available SAFER interface.			C																	

A.4 Allocation of State Electronic Screening Systems Design Requirements

Requirements from the COACH Part 1 Table 4.4-2 are allocated to specific products in Table A.4-1 below. The state should replace the component columns with the columns from its own layout, as described above, before completing the checklist.

The allocation of requirements for Electronic Screening Enrollment are included in this section.

Table A.4-1 Allocation of State Electronic Screening Systems Design Requirements Checklist

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.4.1	Follow FHWA guidelines for Dedicated Short Range Communications (DSRC) equipment.											L1 [F]		L1 [F]		E		E		1159	
1	"For the immediate future, all CVO and Border crossing projects will continue to utilize the current DSRC configuration employed by the programs. This is the "ASTM version 6" active tag.											L1		L1		E		E		115	Florida does not have any international border crossings.

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
2	Beginning January 1, 2001, all CVO and Border Crossing projects will use a provisional standard as described below. In addition, this provisional standard will be designed to ensure interoperability with the existing legacy equipment used in CVO that conforms to ASTM Version 6.											E		E		E		E		1159	Florida does not have any border crossings.
2a	the new ASTM Physical Layer in the active mode;											E		E		E		E		1159	
2b	the existing ASTM Version 6 Data Link layer in the synchronous mode;											E		E		E		E		1159	
2c	and the IEEE 1455 Application Layer.											E		E		E		E		1159	
A.4.2	Use snapshots updated by a SAFER/CVIEW subscription in an			L1 [F]								L1 [F]	L1 [F]			E	E			1171	Credential and safety information will not be used as

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	automated process to support screening decisions.																				part of Ag/BOL screening
1	Carrier snapshots.			L1 [F]								L1 [F]	L1 [F]			E	E				
2	Vehicle snapshots.			L1 [F]								L1 [F]	L1 [F]			E	E				
3	Driver snapshots.			C								C	C								Florida is concerned about driver privacy
A.4.3	Implement interoperability policies as they are developed by ITS America, the American Association of State Highway Transportation Officials, HELP, Inc., MAPS, Advantage CVO, I-95 Corridor Coalition, and the Commercial Vehicle Safety Alliance.											L1 [F]	L1 [F]			E	E				
1	See AASHTO's Commercial Vehicle Electronic Screening Interoperability Policy Resolution, PR-14-97,											L1 [F]	L1 [F]			E	E				

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	Reference 17.																				
A.4.4	Provide electronic mainline or ramp screening for transponder-equipped vehicles, and clear for bypass if carrier & vehicle were properly identified and screening criteria were passed.											L1 [F]	L1 [F]	L1 [F]		E	E	E			
1	For transponder-equipped vehicles, identify carrier at mainline or ramp speeds.											L1 [F]	L1 [F]	L1 [F]		E	E	E			
2	For transponder-equipped vehicles, identify vehicle at mainline or ramp speeds.											L1 [F]	L1 [F]	L1 [F]		E	E	E			

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
3	Use WIM or weight history at mainline speed or on the ramp in making screening decisions.											L1 [F]	L1 [F]	L1 [F]							Florida currently does not screen for weight but is working to develop weight history screening criteria
4	Record screening event data.											E	E	E		E	E	E			
5	For transponder-equipped vehicles, identify driver at mainline or ramp speeds.											C	C	C							
A.4.5	Collect from the carrier a list of jurisdictions and/or e-screening programs in which it wishes to participate in electronic screening and inform those jurisdictions and/or e-screening programs.																			1172	Currently not included in PrePass
A.4.6	Collect from the carrier a list of jurisdictions and/or e-screening programs in which each																			1172	Currently not included in PrePass

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	of its vehicles chooses to participate in e-screening, and inform those jurisdictions and/or e-screening programs.																				
A.4.7	Record transponder number and default carrier ID for each vehicle that intends to participate in e-screening																			1172	[F]
A.4.8	Share carrier ID for each carrier that intends to participate in e-screening with other jurisdictions and/or e-screening programs as requested by the carrier.																			1172	Currently not included in PrePass
1	Via SAFER snapshots																			1172	Currently not included in PrePass
A.4.9	Share transponder number and default carrier ID for each vehicle that intends to																			1172	Currently not included in PrePass

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
	participate in e-screening with other jurisdictions, e-screening programs, or other agencies as requested by the carrier.																				
1	Via SAFER snapshots																			1172	Currently not included in PrePass
A.4.10	Accept each qualified vehicle already equipped with a compatible transponder into your e-screening program without requiring an additional transponder.																			1172	[F]—Florida will be fully compliant with this criteria, as long as the vehicles are outfitted with PrePass compatible transponders.
A.4.11	Enable the carrier to share information about the transponder that you issue with other jurisdictions, e-screening programs, or agencies.																			1172	Currently not included in PrePass

Item #	Compatibility Criteria	SAFETYNET 2000	ASPEN 32/2.0	CVIEW	Citation & Accident	Web Site	IFTA Registration	IFTA Tax Filing	IRP	Intrastate Veh Registr	OS/OW	Screening System – PrePass	Roadside Operations – PrePass	Sensor/Driver Comm – PrePass	E-Screening Enrollment – PrePass	Ag/BOL Screening System	Ag/BOL Roadside Operations	Ag/BOL Sensor/Driver Comm	Ag/BOL E-Screening Enrollment	CRF #	Comments
A.4.12	Verify credentials/safety information with authoritative source prior to issuing citation.		L1, C [F]	C	C		L1, C [F]		L1, C [F]	L1, C [F]	L1, C [F]		C		L1, C [N]		E				L1 - via existing methods; C - via CVIEW Data Mailbox PrePass cannot issue citations.
A.4.13	If a vehicle illegally bypasses or leaves the CV check station, alert law enforcement for possible apprehension.											C	C			E	E				
A.4.14	Report periodically to State safety information system on the activities conducted at each station (e.g. statistics).											C	C			E	E				

This Page Intentionally Blank

Florida CVISN Top-Level Design



Appendix C: COACH, Part 4

**Intelligent Transportation Systems (ITS)
Commercial Vehicle Operations (CVO)**

**CVISN Operational and Architectural
Compatibility Handbook (COACH)**

Part 4

Interface Specification Checklists

Preliminary Version

POR-97-7067 P2.0

October 2000

Please note that this is a Preliminary Issue

It is important to note that this is a preliminary document. All sections included are complete and have been reviewed by JHU/APL, but not by other DOT contractors or state/federal government agencies. The purpose of this issue is to obtain comments and feedback on this document from those external organizations before a baseline version is published.

Note: This document and other CVISN-related documentation are available for review and downloading by the ITS/CVO community from the JHU/APL CVISN site on the World Wide Web. The URL for the CVISN site is:

<http://www.jhuapl.edu/cvisn/>

Review and comments to this document are welcome. Please send comments to:

Ms. Sandra B. Salazar
11100 Johns Hopkins Road
Laurel, MD 20723-6099

Phone: 240-228-7610
Fax: 240-228-6149
E-Mail: sandra.salazar@jhuapl.edu

Change Summary:

This document is under configuration management by the CVISN Architecture Configuration Control Board. The list below provides a brief description of the change request forms (CRFs) processed by the board that impacted this document. Soon we hope to post the CRFs on the CVISN Web site referenced above.

References to the CRFs listed below appear in the text or tables of the document so that the reader knows how each CRF affected Version P2.0 of the document

Version P2.0 of the document incorporates revisions related to these change reports:

- CRF 313 – Disapproved (EDI interface for IRP CH)
- CRF 549 – Transponder ID specified to be a two-part identifier, with the ID itself in hexadecimal representation
- CRF 630 – Split country and subdivision in Driver Unique ID
- CRF 631 – Clarify description of Trip/Load Number to match IEEE P1455 standard
- CRF 1048 – Update CVISN for Web sites and XML for Credentialing
- CRF 1084 – Update Design Template and Stakeholder View

- CRF 1159 – Update DSRC references
- CRF 1164 – Clarify interface options (EDI, XML, Web, other) for Safety
- CRF 1172 – Clarify & complete concepts and requirements for E-Screening Enrollment

**CVISN Operational and Architectural Compatibility Handbook (COACH)
Part 4 – Interface Specification Checklists**

Table of Contents

1.	INTRODUCTION	6
1.1	COACH Structure	6
1.2	COACH Part 4 Interface Specification Checklists Description	6
1.3	Generic CVISN State System Design	8
1.4	How States Should Use This Document	10
2.	STANDARD INTERFACE IDENTIFICATION	12
3.	STANDARD DATA DEFINITIONS	33
4.	REFERENCES	38

This page intentionally left blank.

1. INTRODUCTION

The CVISN Operational and Architectural Compatibility Handbook (COACH) provides a comprehensive checklist of what is required to conform with the Commercial Vehicle Information Systems and Networks (CVISN) operational concepts and architecture. It is intended for use by state agencies with a motor carrier regulatory function and by motor carriers. It is also intended to provide a quick reference for developers of CVISN Core Infrastructure systems.

1.1 COACH Structure

The COACH is divided into 5 parts:

- Part 1 - Operational Concept and Top-Level Design Checklists
- Part 2 - Project Management Checklists
- Part 3 - Detailed System Checklists
- Part 4 - Interface Specification Checklists**
- Part 5 - Interoperability Test Criteria

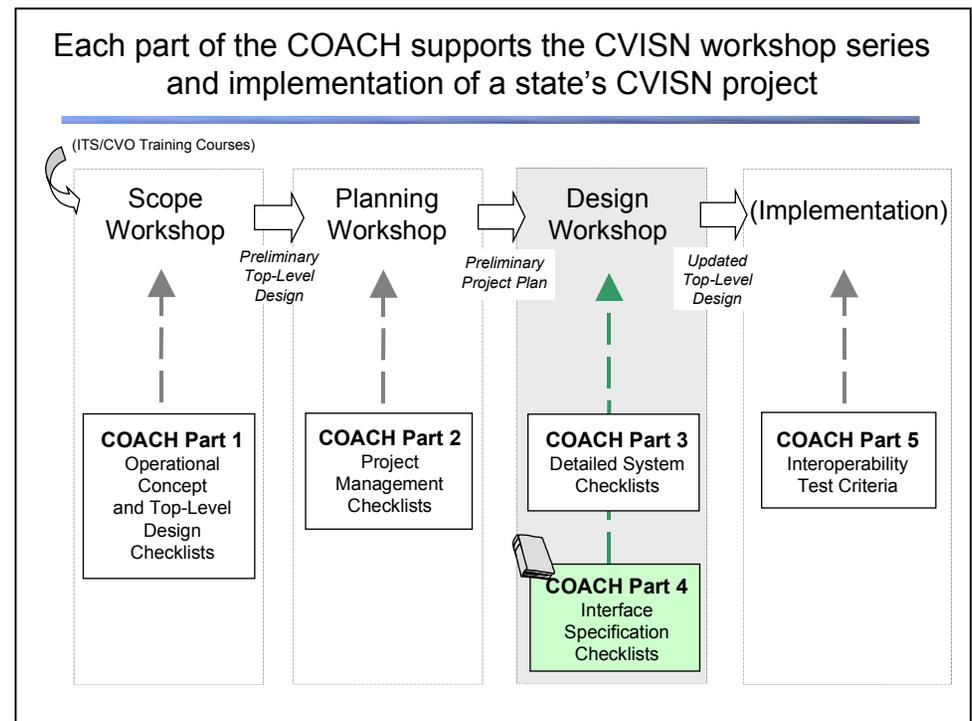
The other parts of the COACH are available at the Browse and Download Documentation; Architecture section of the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>. This is the first revision to the COACH Part 4 [see Reference 37 for the earlier version].

1.2 COACH Part 4 Interface Specification Checklists Description

This volume is Part 4. Part 4 includes several types of checklists related to interfaces:

- Standard Interface Identification Tables, identifying the standardized interfaces to be used between pairs of products [Chapter 2].
- Standard Data Definitions, specifying data format and meaning conventions for items common to more than one standard interface [Chapter 3].
- References, a list of standards and recommended practices related to ITS/CVO interfaces [Chapter 4].

Figure 1-1 The COACH supports the workshops

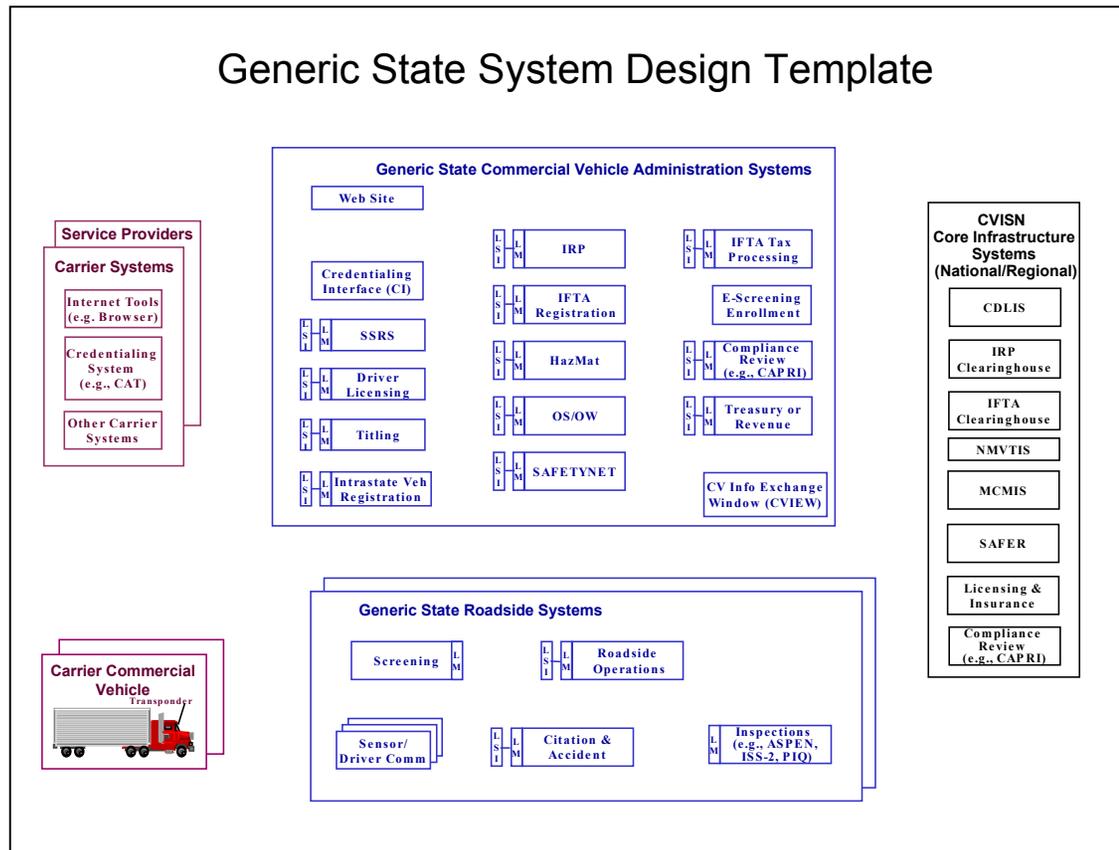


In Part 4, the checklists are intended to be used to indicate which items the reader agrees with, and to provide a mechanism for planning development activities. Each state should maintain a master filled-in copy of the COACH.

1.3 Generic CVISN State System Design

Figure 1-2 below depicts the generic CVISN state system design template. CRF 1084 has been applied. Material in this document is based upon this generic design. Products equivalent to the carrier and state products shown may be substituted in the design. For example, a state may choose to combine the HazMat and Oversize/Overweight permitting functions into one product. In that case, the interfaces specified would apply to the combined product rather than to two distinct products.

Figure 1-2 Generic State Design Template



The systems shown in the generic design are defined in the CVISN Glossary [Reference 1]. The generic design represents the main elements and interfaces needed for a state to implement the CVISN architecture. Each state will adapt the generic design to accommodate their existing (legacy) systems, and to meet their own unique needs. The generic design is explained in more detail in the COACH Part 3 [Reference 5].

Use of standardized Dedicated Short Range Communications (DSRC) and either computer-to-computer or Web interfaces is required for architecture conformance. For now, ANSI X12 Electronic Data Interchange (EDI) interfaces are recommended for computer-to-computer exchanges, since CVO implementation guidance already exists. In the future, the eXtensible Markup Language (XML) may be an alternative to EDI for some interfaces. It may also be possible to use XML with or instead of HTML for Web interfaces. Each state chooses whether to modify a legacy system (LM - legacy modification) to support EDI or non-EDI formats (and other new functions and interfaces), or to create a Legacy System Interface (LSI) to deal with the EDI or non-EDI-to-native form interface. Many CVISN states are implementing a mix of LSIs and LMs. Throughout this document, the generic state system design is based on choosing to modify the legacy systems (i.e., implement LMs).

In the generic design depicted here, the legacy credentials systems update the appropriate snapshot segments in CVIEW using EDI. In this design, both the Roadside Operations and the inspection system products subscribe to CVIEW to receive snapshots. The CVIEW-Roadside Operations connection is an EDI interface. The CVIEW-inspection system interface uses the “application file format” that corresponds to a file format that could be input into an EDI translator.

To achieve interoperability, the CVISN architecture calls for the use of open standards for carrier-state and state-state (via the CVISN Core Infrastructure) interfaces. Interfaces that are wholly within a state government’s control (e.g., between state agencies) are not required to use open standards. Most CVISN Model Deployment States have chosen to use open standards for some within-state interfaces, and have chosen to use existing custom interface agreements for others. For example, some states have chosen to implement LSIs instead of modifying their existing IRP or IFTA products. They are implementing the LSIs as small applications running on the same computer as the Credentialing Interface (CI). For those states, there are no EDI interfaces between the CI and their existing IRP or IFTA systems. Some of those states have also decided that the CI will provide snapshot segment updates of credentials data to CVIEW on behalf of the IRP or IFTA systems. In this document we depict one generic design for simplicity. The generic design shown here maximizes the use of open standards. Other designs are also acceptable under the CVISN architecture. Refer to the technical volumes of the CVISN Guide series for further information [References 16-19].

1.4 How States Should Use This Document

The COACH summarizes key concepts and architectural guidelines for CVISN. This version of the COACH Part 4 focuses on topics important to states. The COACH Part 1 defines the CVISN Level 1 criteria. This document identifies the detailed interface requirements associated with CVISN Level 1.

To gain a more complete understanding of CVISN, state planners and designers should read the Introductory Guide to CVISN [Reference 20], other parts of the COACH [References 2-6], and the CVISN System Design Description [Reference 15]. This version of the COACH Part 4 is intended to be a working document that is used for designing modifications and enhancements to existing state systems, and for planning the development of new systems in each user's state. This document will be used in the planned CVISN workshops.

The key concepts and architectural guidelines for CVISN states have been summarized in this document in a series of checklist tables. Each table in this document consists of these columns, unless otherwise noted:

- Commit Level (F/P/N) – the state's commitment level to the item
 - Using the first column of each checklist entry, a **commitment level should be filled in** by the state. There are three possible levels of commitment:
 - (F) This rating indicates a full commitment. This level means that at least 80% of the state's systems involved in the process implied by the checklist item are or intend to be compatible with the checklist item statement.
 - (P) This rating indicates a partial commitment. This level means that between 50% and 80% of the state's systems involved in the process implied by the checklist item are or intend to be compatible with the checklist item statement.
 - (N) This rating indicates no commitment. This level means that less than 50% of the state's systems involved in the process implied by the checklist item are or intend to be compatible with the checklist statement.
- Reqs Level - the compatibility requirement level assigned to this compatibility criterion by the FMCSA CVISN project team
 - For a state to be "compatible with CVISN," it must implement selected items in the checklists. To distinguish those items, the CVISN project team has assigned a **compatibility requirement level** to each checklist item:

(L1) This rating identifies a CVISN Level 1 compatibility requirement.

(E) This rating indicates an enhanced level of CVISN compatibility. These items may require a little longer to complete (3-4 years).

(C) This rating indicates a complete level of CVISN Compatibility. Satisfying all these provides complete CVISN compatibility. These items are expected to require a longer-range (5 or more years) time frame.

States are expected to focus initially on checklist items with an "L1" compatibility requirement level rating. Making a *partial commitment* indicates that the state will at least demonstrate the feasibility of that concept or architectural guideline. Making a *full commitment* indicates that the state will fully implement the concept or architectural guideline and be ready for the next steps.

- Comments – available for the state to refer to another document or plan, note a question, record a clarifying comment, etc.

If the state maintains its master copy of this document electronically, the following conventions are recommended when filling in the columns to illustrate the “firmness” of the state’s plan:

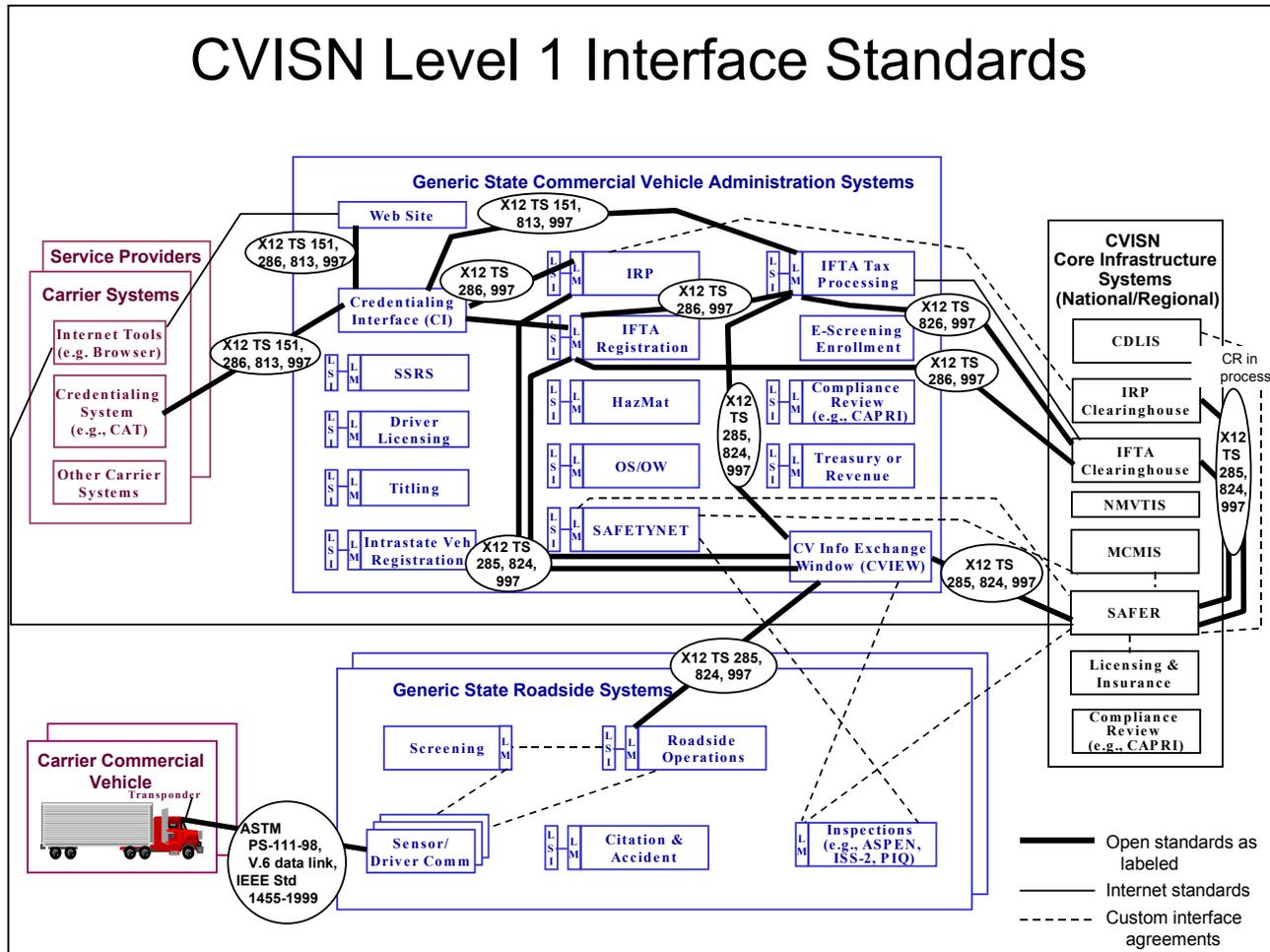
- *Italics type* : Tentative, not approved by the final decision makers
- Regular type : Approved by the decision makers (or supported by consensus)
- **Bold type** : Completed

States are to fill out the “Commit Level” column for the tables prior to attending the CVISN Design Workshop.

2. STANDARD INTERFACE IDENTIFICATION

Figure 2-1 shows all the CVISN Level 1 interface standards overlaid onto the generic state design template. CRF 313, 1084, and 1159 have been applied. The **open standards shown in the ovals** are listed below:

Figure 2-1 CVISN Level 1 Interface Standards



ANSI ASC X12 EDI Standard Transaction Sets

These are the ANSI EDI standards used in CVISN applications. A subset of these transactions is used to support Level 1 capabilities.

- TS 150 Tax Rate Notification
- TS 151 Electronic Filing of Tax Return Data Acknowledgement
- TS 284 CV Safety Reports (available for non-ASPEN inspection systems)
- TS 285 CV Safety & Credentials Information Exchange (snapshots)
- TS 286 Commercial Vehicle (CV) Credentials
- TS 813 Electronic Filing of Tax Return Data
- TS 820 Payment Order/Remittance Advice
- TS 824 Application Advice
- TS 826 Tax Information Exchange
- TS 997 Functional Acknowledgement

The EDI standards are available for purchase from the Data Interchange Standards Association (DISA), Inc., 1800 Diagonal Road, Suite 200, Alexandria, VA 22314-2852; email publications@disa.org; phone 1-888-363-2334; web site <http://www.disa.org/>. As of the publication of this document, Reference 7 is the current standard.

The Federal Highway Administration (FHWA) and Federal Motor Carrier Safety Administration (FMCSA) sponsored the development of several Implementation Guides (IGs) on how to use the EDI transaction sets for CVO applications. JHU/APL has developed IGs for TS 284, TS 285, TS 286 (IRP, IFTA, OS/OW, Electronic Screening Enrollment), and TS 824, as well as a FMCSA Code Directory. See the Browse and Download Documentation; EDI Implementation Guides section of the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/> for the latest implementation guides. For information about the transaction sets related to tax filing, see <http://www.taxadmin.org/>.

DSRC-Related Standards

- | | |
|--------------------|----------------------------|
| ASTM PS-111-98 | Frequency (Physical) Layer |
| ASTM v6 | Data Link Layer |
| IEEE Std 1455-1999 | Application Layer |

CRF 1159 has been applied. The DSRC standards are still in the approval cycle. For current status information, see <http://www.its.dot.gov/standard/standard.htm>.

These ANSI and DSRC open standards are the ones that states implementing CVISN capabilities should adopt.

The interfaces between carrier's Internet browsers and various World Wide Web applications, such as the State's Web Site, use Internet standards. See <http://www.w3.org/> for information about Internet standards.

CRF 1048 authorized updating CVISN documents to reflect FMCSA's new policy on credentials administration. The policy change resulted from analyzing the results of a survey about electronic credentialing interactions between motor carriers and state information systems (see Reference 38). The new policy is:

- FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface.
- FMCSA recommends that states survey their stakeholders to determine whether both interfaces would be appropriate.
- FMCSA recommends that, in the near term (over the next ~2 years), carriers and states use X12 EDI for computer-to-computer interfaces unless the state has evidence that customers support another approach.
- FMCSA encourages the exploration of XML as an alternative to EDI.

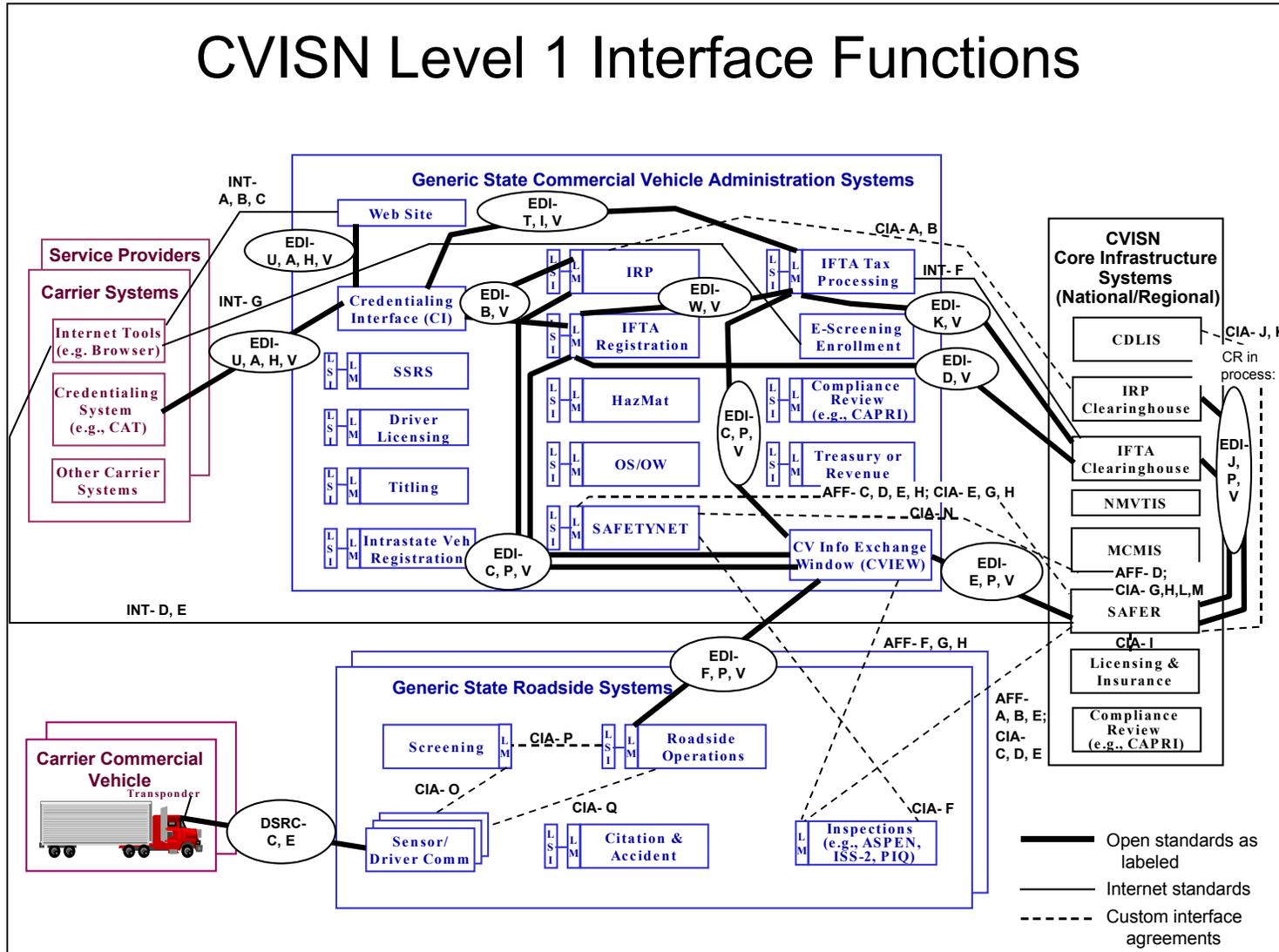
Because it is not yet clear how XML will be used in support of CVISN capabilities, XML interfaces are not shown in Figures 2-1 and 2-2. However, any EDI interface is a potential candidate for an XML interface. This document will be updated to reflect XML interfaces after they have been prototyped by states. See the World Wide Web Consortium (W3C) website <http://www.w3.org/XML/> for more information on XML specifications and the W3C recommendations. If you are interested in participating in a working group to explore the use of XML for CVO information exchanges, please contact the person listed on the back of the title page of this document.

The interfaces between FHWA and FMCSA-developed safety-related systems (ASPEN and SAFER, ASPEN and CVIEW, SAFER and SAFETYNET, SAFER and MCMIS, SAFER and Licensing & Insurance) are based on custom interface agreements defined by the system developers and endorsed by FHWA and FMCSA. Under special circumstances, FMCSA tolerates, but does not encourage, the use of custom interface agreements for interchanges between systems operated under different "jurisdictions".

The purposes of the interfaces are explained in the remainder of this section.

In Figure 2-2, the standard names (e.g., X12 TS 286) have been replaced with letters. The letters correspond to particular functions as illustrated in the table that follows. CRF 1084 and 313 have been applied.

Figure 2-2 CVISN Level 1 Interface Functions



The checklist table below, Table 2-1, explains the purpose for each standardized interface shown in Figure 2-2. In addition to the standard column definitions explained in section 1.4, this table contains these columns:

- Label – the identification shown in Figures 2-2
- Std – the open standard or custom interface agreement to which the label refers and references that contain details of the standard and how to implement it
- Interface Purpose - summary versions of the interface exchanges expected, culled from other CVISN documentation
- From System – based on the generic design, the system that will send the information listed in the Interface Purpose column
- To System – based on the generic design, the system that will receive the information listed in the Interface Purpose column

There are more interfaces listed in the table than are shown on the drawings. Those additional interfaces correspond to enhanced or complete capabilities, as indicated by the “Req Level” column. For details about implementing the standardized interfaces, review the standards and implementation guides.

If the ‘Req Level’ cell is in *italics*, it means that the capability will be supported during the Level 1 timeframe, but is not yet available as of August 2000.

FMCSA’s new policy on credentials administration applies to CVISN Level 1. If a state chooses to implement only a person-to-computer credentialing approach, then implementation of a computer-to-computer interface is considered an Enhanced capability. Similarly, if a state chooses to implement only a computer-to-computer credentialing approach, then implementation of a person-to-computer interface is considered an Enhanced capability.

There are several connection paths shown for ASPEN and SAFETYNET. They represent the capabilities planned as the products evolve to more powerful computers and more sophisticated software. Details of the evolution paths will be included in the CVISN Guide to Safety Information Exchange [Reference 17].

The categories of interfaces shown on Figure 2-2 and in Table 2-1 are:

- EDI – Electronic Data Interchange; ANSI X12 standards
- DSRC – Dedicated Short-Range Communications; IEEE and ASTM standards
- AFF – Application File Format; data structured in a format that is a precursor to an EDI exchange
- INT – Internet; HTML standards

- CIA – Custom Interface Agreement; data exchanged according to a particular custom interface agreement
- XML - eXtensible Markup Language

Table 2-1 Standard Interface Identification Table

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
N	EDI-A	TS 286 Ref 7, 9, 11, 12, 14	Commercial Vehicle (CV) Credentials: <ul style="list-style-type: none"> • Submit initial/renewal/supplemental electronic application for credentials • Submit trip permit application • Notify payee of payment method • Submit corrected application • Send renewal notice • Return credentials data to applicant • Return temporary credential • Return trip permit • Notify payer of fees due • Reject application 	CAT (or Web Site) CAT (or Web Site) CAT (or Web Site) CAT (or Web Site) CI CI CI CI CI CI	CI CI CI CI CI CI CI CI CI	L1; E	L1 = IRP & IFTA E = other credentials Uniface system and Internet standards will be used to perform this function.
N	EDI-B	TS 286 Ref 7, 9, 11, 12, 14	CV Credentials: <ul style="list-style-type: none"> • Pass application to legacy system • Return credentials data • Return temporary credential • Return trip permit • Report fees due • Reject application 	CI Legacy admin system Legacy admin system Legacy admin system Legacy admin system Legacy admin system	Legacy admin system CI CI CI CI CI	L1; E	L1 = IRP & IFTA E = other credentials Uniface system and Internet standards will be used to perform this function.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
P	EDI-C	TS 285 Ref 7, 13-14	CV Safety & Credentials Information Exchange: <ul style="list-style-type: none"> Update snapshot segment Request carrier, vehicle, or driver information (i.e. request a snapshot view) Respond to carrier, vehicle, or driver information request or fulfill subscription (i.e. send one or more snapshots using a particular view) 	Legacy admin system or E-screening Enrollment (or CI) Legacy admin system or E-screening Enrollment (or CI) CVIEW	CVIEW CVIEW Legacy admin system or E-screening Enrollment (or CI)	L1; C	L1 = carrier & vehicle C = driver CRF 1172 E=E-screening Enrollment Depends on CVIEW implementation. EDI is possible; although flat file, XML and/or SQL are more likely.
F	EDI-D	TS 286 Ref 7, 11, 14	CV Credentials: <ul style="list-style-type: none"> Submit application data Retrieve demographic data from Clearinghouse for review 	State IFTA Registration IFTA Clearinghouse	IFTA Clearinghouse State IFTA Registration	L1	

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqts Level	Comments
F	EDI-E	TS 285 Ref 7, 13-14	CV Safety & Credentials Information Exchange: <ul style="list-style-type: none"> Update snapshot segment Request carrier, vehicle, or driver information (i.e. request a snapshot view) Respond to carrier, vehicle, or driver information request or fulfill subscription (i.e. send one or more snapshots using a particular view) Update snapshot segment 	CVIEW CVIEW SAFER SAFER	SAFER SAFER CVIEW CVIEW	L1; C	L1 = carrier & vehicle C = driver
N	EDI-F	TS 285 Ref 7, 13-14	CV Safety & Credentials Information Exchange <ul style="list-style-type: none"> Request carrier or vehicle information (i.e. request a snapshot view) Respond to carrier or vehicle information request (i.e. send one or more snapshots using a particular view) 	Roadside Operations CVIEW	CVIEW Roadside Operations	L1; C	L1 = carrier & vehicle C = driver CVIEW and PrePass will exchange data using XML or flat file.
	EDI-G		<i>deleted</i>				CRF 313
N	EDI-H	TS 813 Ref 7, 35	Tax Return: <ul style="list-style-type: none"> File electronic IFTA tax return 	CAT (or Web Site)	CI	L1	Uniface system and Internet standards will be used to perform this function.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
N	EDI-I	TS 813 Ref 7, 35	Tax Return: <ul style="list-style-type: none"> Pass tax return to IFTA tax return processing system 	CI	State IFTA Tax Processing System	L1	Uniface system and Internet standards will be used to perform this function.
F	EDI-J	TS 285 Ref 7, 13-14	CV Safety & Credentials Information Exchange: <ul style="list-style-type: none"> Update snapshot segment 	IFTA or IRP Clearinghouse	SAFER	L1	NOTE: Change request in process for this to be implemented on behalf of states that belong to clearinghouse but are not yet CVISN states
F	EDI-K	TS 826 Ref 7, 36	Tax Information Exchange: <ul style="list-style-type: none"> Send data on fuel tax filings among jurisdictions; summarize detailed tax information from individual returns and balance due/owed (netting and pre-netting summaries) 	IFTA Clearinghouse	State IFTA Tax Processing System	L1	
F	EDI-L	TS 150 Ref 7, 34	Tax Rate Notification <ul style="list-style-type: none"> Send latest IFTA tax rates 	CI	CAT or Web Site	E	
N	EDI-M	TS 284 Ref 7, 14, 31	CV Safety Reports (Inspection Report) <ul style="list-style-type: none"> Submit safety report Request safety report Respond to safety report request 	CVIEW CVIEW SAFER	SAFER SAFER CVIEW	L1	Florida uses ASPEN inspection software to send directly to the SAFER Data Mailbox.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
N	EDI-N	TS 284 Ref 7, 14, 31	CV Safety Reports (Inspection Report) <ul style="list-style-type: none"> • Submit original safety report • Request safety report • Respond to safety report request 	non-ASPEN Inspection system non-ASPEN Inspection system CVIEW	CVIEW CVIEW non-ASPEN Inspection system	LI	Florida uses ASPEN inspection software.
F	EDI-O	TS 284 Ref 7, 14, 31	CV Safety Reports (Crash Data) <ul style="list-style-type: none"> • Submit original safety report 	Citation & Accident	SAFETYNET 2000 via CVIEW & SDM	C	SDM = SAFER Data Mailbox
F	EDI-P	TS 824 Ref 7, 14, 40	Application Advice <ul style="list-style-type: none"> • Acknowledge successful processing of TS 285 update message data • Report errors in processing of TS 285 update message data 	receiver of 285 receiver of 285	sender of 285 sender of 285	LI	Applicable only where EDI is used.
F	EDI-Q	TS 150 Ref 7, 34	Tax Rate Notification <ul style="list-style-type: none"> • Send latest IFTA tax rates 	State IFTA Tax Processing System	CI	E	
NA	EDI-R	TS 286 Ref 41	Electronic Screening Enrollment <ul style="list-style-type: none"> • Submit e-screening enrollment data 	CAT or other carrier system	E-Screening Enrollment	E	PrePass is responsible for this function.
CVISN PM and Task Team	EDI-S	TS 820 Ref 7	Payment Order/Remittance Advice : <ul style="list-style-type: none"> • Initiate EFT payment • Report payment received 	payer state's bank	payer's bank State Treasury or Revenue system	E	

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Repts Level	Comments
N	EDI-T	TS 151 Ref 7, 32	Electronic Filing of Tax Return Data Acknowledgement <ul style="list-style-type: none"> Report errors encountered when attempting to process IFTA tax return (813) 	State IFTA Tax Processing System	CI	L1	Uniface system and Internet standards will be used to perform this function.
N	EDI-U	TS 151 Ref 7, 32	Electronic Filing of Tax Return Data Acknowledgement <ul style="list-style-type: none"> Pass IFTA tax return error message Pass IFTA tax return successfully processed message 	CI CI	CAT (or Web Site) CAT (or Web Site)	L1	Uniface system and Internet standards will be used to perform this function.
F	EDI-V	TS 997 Ref 7, 33		all EDI-receiving systems	all EDI sending-systems	L1	Applicable only where EDI is used.
N	EDI-W	TS 286 Ref 7, 11, 14	CV Credentials: <ul style="list-style-type: none"> Submit application data (complete or subset; (demographic information) 	State IFTA Registration System	State IFTA Tax Processing System	L1	Uniface system will perform this function.
F	EDI-X	TS 284 Ref 7, 14, 31	Inspection Report <ul style="list-style-type: none"> Fulfill inspection report subscription Query for inspection report Respond to inspection query 	SAFER Law Enforc User SAFER	Law Enforcement User SAFER Law Enforc User	L1	Florida will use existing ASPEN/PIQ connectivity.
N	EDI-Y	TS 286 Ref 7, 11, 14	CV Credentials: <ul style="list-style-type: none"> Query for latest credentials status Respond to credentials query 	Law Enforcement Credentialing System of record	Credentialing System of record Law Enforcement	E	Depends on CVIEW implementation. Roadside access to CVIEW likely will not be via EDI.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
F	DSRC	various	<p>According to draft USDOT policy,</p> <ul style="list-style-type: none"> For the immediate future, all CVO and Border crossing projects will continue to utilize the current DSRC configuration employed by the programs. This is the "ASTM version 6" active tag. Beginning January 1, 2001, all CVO and Border Crossing projects will use a provisional standard as described below. In addition, this provisional standard will be designed to ensure interoperability with the existing legacy equipment used in CVO that conforms to ASTM Version 6: <ul style="list-style-type: none"> a. the new ASTM Physical Layer in the active mode; b. the existing ASTM Version 6 Data Link layer in the synchronous mode; c. and the IEEE 1455 Application Layer. 				<p>CRF 1159</p> <p>PrePass is responsible for this function.</p>
F	DSRC-A	IEEE Std 1455-1999 Ref 24	<p>CV Electronic Screening Message Set</p> <ul style="list-style-type: none"> CV Screening Identification 	Transponder	Screening/Driver Comm	E	<p>CRF 1159</p> <p>PrePass is responsible for this function.</p>

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
F	DSRC-B	IEEE Std 1455-1999 Ref 24	CV Screening Message Set All messages	Transponder or Screening/Driver Comm	Screening/Driver Comm or Transponder	C	CRF 1159 PrePass is responsible for this function.
N	DSRC-C	IEEE Std 1455-1999 Ref 24	CV Border Clearance Message Set • Trip Identification Number message	Transponder	Screening/Driver Comm	L1	CRF 1159 .
N	DSRC-D	IEEE Std 1455-1999 Ref 24	CV Border Clearance Message Set All messages	Transponder or Screening/Driver Comm	Screening/Driver Comm or Transponder	C	CRF 1159 .
F	DSRC-E	ASTM 17.51 Ver 6 Ref 30	DSRC provisional standard	Transponder or Screening/Driver Comm	Screening/Driver Comm or Transponder	L1	CRF 1159 PrePass is responsible for this function.
F	DSRC-F	ASTM 17.51 Ver 6 Ref 22	ASTM Physical Layer in the active mode	Transponder or Screening/Driver Comm	Screening/Driver Comm or Transponder	E	CRF 1159 PrePass is responsible for this function.
F	DSRC-G	ASTM 17.51 Ver 6 Ref 23	The existing ASTM version 6 Data Link Layer in the synchronous mode	Transponder or Screening/Driver Comm	Screening/Driver Comm or Transponder	E	CRF 1159 PrePass is responsible for this function.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
F	DSRC-H	IEEE Std 1455-1999 Ref 24	The IEEE 1455 Application Layer	Transponder or Screening/Driver Comm	Screening/Driver Comm or Transponder	E	CRF 1159 PrePass is responsible for this function.
F	AFF-A	applica-tion file format Ref 25	Snapshot <ul style="list-style-type: none"> Fulfill snapshot subscription Query for snapshot(s) Response to query 	SAFER ASPEN SAFER	ASPEN SAFER ASPEN	LI	
F	AFF-B	applica-tion file format Ref 25	Inspection Report <ul style="list-style-type: none"> Submit original inspection report Query for inspection report Respond to inspection query 	ASPEN ASPEN SAFER	SAFER SAFER ASPEN	LI	
F	AFF-C	applica-tion file format Ref 25	Snapshot <ul style="list-style-type: none"> Fulfill snapshot subscription Query for snapshot(s) Response to query 	SAFER SAFETYNET 2000 SAFER	SAFETYNET 2000 SAFER SAFETYNET 2000	LI	
F	AFF-D	applica-tion file format Ref 25	Inspection Reports, Compliance Reviews, Crash Data, Enforcement Data <ul style="list-style-type: none"> Update request (upload and store) Update confirmation (confirm success) 	SAFETYNET 2000 MCMIS via SDM	MCMIS via SDM SAFETYNET 2000	LI	SDM = Safer Data Mailbox
F	AFF-E	applica-tion file format Ref 25	Inspection Report <ul style="list-style-type: none"> Submit original inspection report 	ASPEN	SAFETYNET 2000 via SDM	LI	SDM = Safer Data Mailbox
N	AFF-F	applica-tion file format Ref 25	Snapshot <ul style="list-style-type: none"> Fulfill snapshot subscription Query for snapshot(s) Response to query 	CVIEW ASPEN CVIEW	ASPEN CVIEW ASPEN	LI	ASPEN data will be sent directly to SAFER, CVIEW may get it from there.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
F	AFF-G	applica-tion file format Ref 25, 26	Inspection Report <ul style="list-style-type: none"> • Submit original inspection report 	ASPEN	SAFER via CVIEW	L1	ASPEN data will be sent directly to SAFER, CVIEW may get it from there.
F	AFF-H	applica-tion file format Ref 25, 26	Inspection Report <ul style="list-style-type: none"> • Submit original inspection report 	ASPEN	SAFETYNET 2000 via CVIEW & SDM	L1	SDM = Safer Data Mailbox ASPEN data will be sent directly to SAFER, CVIEW may get it from there.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
F	INT-A	Internet Standards	Equivalent of Commercial Vehicle (CV) Credentials: <ul style="list-style-type: none"> • Submit initial/renewal/supplemental electronic application for credentials • Submit trip permit application • Indicate payment method • Submit corrected application • Display vehicle inventory data (for renewal) • Display credentials data • Display temporary credential for printing • Display trip permit for printing • Display invoice • Display application rejection message 	Internet Tools Internet Tools Internet Tools Internet Tools Web Site Web Site Web Site Web Site Web Site Web Site	Web Site Web Site Web Site Web Site Internet Tools Internet Tools Internet Tools Internet Tools Internet Tools	L1; E	L1 = IRP & IFTA E = other credentials CRF 1048 Uniface system will be responsible for IRP, IFTA, and Vehicle Registration credentials. (Temporary credentials are under consideration.) Other credentials are unknown at this time.
F	INT-B	Internet Standards	Tax Return: <ul style="list-style-type: none"> • File electronic IFTA tax return 	Internet Tools	Web Site	LI	CRF 1048 Uniface system will perform this function.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqts Level	Comments
F	INT-C	Internet Standards	Electronic Filing of Tax Return Data Acknowledgement <ul style="list-style-type: none"> • Display IFTA tax return error message • Display IFTA tax return successfully processed message 	Web Site Web Site	Internet Tools Internet Tools	L1	CRF 1048 Uniface system will be perform this function.
N	INT-D	Internet Standards	Snapshots <ul style="list-style-type: none"> • Query for snapshot(s) • Response to query 	Internet Tools SAFER	SAFER Internet Tools	L1	
N	INT-E	Internet Standards	Inspection Reports <ul style="list-style-type: none"> • Query for inspection report • Respond to inspection query 	Internet Tools SAFER	SAFER Internet Tools	L1	
F	INT-F	Internet Standards	Tax Rate Notification <ul style="list-style-type: none"> • Send latest IFTA tax rates 	IFTA Clearinghouse	State IFTA Tax Processing System	L1	
F	INT-G	Internet Standards	Electronic Screening Enrollment <ul style="list-style-type: none"> • Submit e-screening enrollment data 	Internet Tools	E-Screening Enrollment	L1	CRF 1172 PrePass is responsible for this function.
F	CIA-A	custom interface agreement	Recaps	State IRP	IRP Clearinghouse	L1	
F	CIA-B	custom interface agreement	Netting/Transmittal data	IRP Clearinghouse	State IRP	L1	
F	CIA-C	custom interface agreement Ref 25	Snapshots <ul style="list-style-type: none"> • Fulfill snapshot subscription • Query for snapshot(s) • Response to query 	SAFER ASPEN SAFER	ASPEN SAFER ASPEN	L1	

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqts Level	Comments
F	CIA-D	custom interface agreement Ref 25	Inspection Reports <ul style="list-style-type: none"> Submit original inspection report Query for inspection report Respond to inspection query 	ASPEN ASPEN SAFER	SAFER SAFER ASPEN	L1	
F	CIA-E	custom interface agreement	Inspection Reports <ul style="list-style-type: none"> Submit original inspection report 	ASPEN	SAFETYNET via SDM	L1	SDM = Safer Data Mailbox
F	CIA-F	custom interface agreement	Inspection Reports <ul style="list-style-type: none"> Submit original inspection report 	ASPEN	SAFETYNET via electronic bulletin board	L1	
F	CIA-G	custom interface agreement Ref 25	Facsimile request Facsimile response	SAFETYNET MCMIS via SDM	MCMIS via SDM SAFETYNET	L1	SDM = Safer Data Mailbox
NA	CIA-H	custom interface agreement Ref 25	F-report request F-report response	SAFETYNET MCMIS via SDM	MCMIS via SDM SAFETYNET	L1	SDM = Safer Data Mailbox Florida is not responsible for this function.
NA	CIA-I	custom interface agreement Ref 25	Snapshot <ul style="list-style-type: none"> Update carrier snapshot segment 	Licensing & Insurance	SAFER	L1	Florida is not responsible for this function.
F	CIA-J	custom interface agreement Ref 25	Driver Status Report	CDLIS	SAFER	L1	
F	CIA-K	custom interface agreement Ref 25	Driver History Report	CDLIS	SAFER	L1	

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqs Level	Comments
NA	CIA-L	custom interface agreement Ref 25	Snapshot <ul style="list-style-type: none"> Update carrier snapshot segment 	MCMIS	SAFER	L1	Florida is not responsible for this function.
NA	CIA-M	custom interface agreement Ref 25	Inspection Reports, Compliance Reviews, Crash Data, Enforcement Data <ul style="list-style-type: none"> Provide past reports 	MCMIS	SAFETYNET	L1	Florida is not responsible for this function.
NA	CIA-N	custom interface agreement Ref 25	Inspection Reports, Compliance Reviews, Crash Data, Enforcement Data <ul style="list-style-type: none"> Provide reports 	SAFETYNET	MCMIS	L1	Florida is not responsible for this function.
F	CIA-O	custom interface agreement	Sensor data Control data	Sensor/Driver Comm Screening	Screening Sensor/Driver Comm	L1	PrePass is responsible for this function.
F	CIA-P	custom interface agreement	Screening criteria, snapshot data Screening results	Roadside Operations Screening	Screening Roadside Operations	L1	CVIEW will deliver this information to the PrePass CVIEW/Host. PrePass CVIEW/Host will deliver it to the roadside.
F	CIA-Q	custom interface agreement	Sensor data Control data	Sensor/Driver Comm Roadside Operations	Roadside Operations Sensor/Driver Comm	L1	PrePass is responsible for this function.

Commit Level (F/P/N)	Label	Std	Interface Purpose	From System	To System	Reqts Level	Comments
	XML-tbd	W3C recommendation Ref 39	CV Safety & Credentials Information Exchange	tbd	tbd	E	CRF 1164 Specific information will be added at a later time.
	XML-tbd	W3C recommendation Ref 39	CV Credentials Information Exchange	tbd	tbd	E	CRF 1048 Specific information will be added at a later time.

NOTE: For CVISN Level 1,

- The credentials handled by TS 286 include IRP Registration and IFTA Registration; future credentials include Single State Registration/Unified Carrier Registration, Oversize/Overweight Permitting, HazMat Permitting, Vehicle Titling, Intrastate Vehicle Registration
- The snapshots handled by TS 285 include carrier (safety and credentials elements), vehicle (safety and credentials elements); future snapshots may include driver
- The safety reports handled by TS 284 include Inspection Results; future safety reports include HazMat Incident, Compliance Review, and Crash
- EDI interfaces are potential candidates for XML interfaces. This document will be updated to reflect XML interfaces after they have been prototyped by states.

3. STANDARD DATA DEFINITIONS

Ideally, there would be a common data dictionary for use throughout all systems associated with CVISN. That is not practical, since many legacy systems have different data definitions, and new systems are being developed by different organizations. Several documents define data elements that support CVO functions and standards [References 14, 21, 24, 27, 28, 29].

The data items listed in this chapter are common across more than one interface standard. They are used as “keys” to access information about the major entities: carrier, vehicle, driver, shipment, and trip. When systems use common keys, it is possible to match information sets such as safety and credentials data. The specifications in Table 3-1 define the key identifier characteristics to be adopted when exchanging information using the standards. It may be necessary to translate the identifier from a legacy system into this format when using a standard to exchange information. In addition to the standard column definitions explained in section 1.4, this table contains these columns:

- Entity – Any person, place, thing, concept, or event that has meaning to an enterprise, and about which data can be stored. (Example: vehicle)
- Identifier Name – the name of the data element that should be standard across systems for the entity
- Identifier Segment – a list of components that make up the data name, including whether the segment should be alphabetic, numeric, or alphanumeric
- Number of Characters – the maximum length that should be supported for each segment

For further information about standard identifiers, see Reference 8.

Table 3-1 Standard Data Definitions

Commit Level (F/P/N)	Entity	Identifier Name	Identifier Segments	Number of Characters	Reqs Level	Comments
F	Motor Carrier	Primary Carrier ID e.g., For interstate carrier: MCI 12345 A001 (note that MCI is the code used for ID Type USDOT #)	ID Type (alphanumeric); if carrier is interstate, the type must be USDOT type code (MCI); for intrastate carrier without a USDOT number, the type code must be state-specific (0B) +	3 (max)	L1	<p>Florida is in the process of assigning U.S. DOT numbers to all intrastate carriers. Task Team currently is discussing the issues in identifying the universe of intrastate carriers that should be issued a DOT number.</p>
		e.g., For intrastate carrier 0B US-CA 123A45689 1234 (note that 0B is the code used ID Type State-Specific)	Jurisdiction Code, if carrier is intrastate (alphanumeric); 2 character country code, hyphen, 2-character subdivision code; the allowable country and subdivision codes will be defined in the FMCSA Code Directory +	5		
			Carrier-Specific Identifier corresponding to the ID type (alphanumeric); if carrier is interstate, must be USDOT number; if carrier is intrastate and has a USDOT number, must be USDOT number; for state-specific IDs, the Carrier-Specific Identifier may include a prefix to clarify the agency/source of the identifier) +	12 (max)		
				4 (max)		

Commit Level (F/P/N)	Entity	Identifier Name	Identifier Segments	Number of Characters	Reqt Level	Comments
			Carrier Terminal ID designated by carrier (alphanumeric)			
F	Vehicle	Vehicle Identification Number e.g., 1FDKE30F8SHB33184 and Vehicle Plate ID e.g., US CA 12345664820M	VIN assigned by manufacturer (alphanumeric) Country code; the allowable country codes will be defined in the FMCSA Code Directory + Jurisdiction (state or province) code (alphanumeric); the allowable subdivision codes will be defined in the FMCSA Code Directory + License plate ID (alphanumeric)	30 (max) 2 2 12 (max)	L1	

Commit Level (F/P/N)	Entity	Identifier Name	Identifier Segments	Number of Characters	Reqs Level	Comments
F	Transponder	Transponder ID e.g., 0 123456789	Transponder ID Definition Flag (0=current; 1=IEEE P1455) +	1 bit	L1	<p>CRF 549</p> <p>PrePass will supply the transponders and track their usage. Florida will be given monthly reports regarding bypasses at their sites.</p> <p>The transponder ID number will not be available outside the PrePass system.</p>
			<i>If Transponder ID Definition Flag = current</i> , then the other segment is: Transponder Serial Number assigned by manufacturer	32-bit hexadecimal value		
			<i>If Transponder ID Definition Flag = IEEE P1455</i> , then the other segments are: Manufacturer Identifier + Transponder Serial Number assigned by manufacturer	16 bits; hexadecimal value 20 bits; hexadecimal value	E	
NA	Driver	Driver Unique ID e.g., US MD B999999999999A	Country code; the allowable country codes will be defined in the FMCSA Code Directory +	2	L1	<p>Driver information will not be stored.</p>
			Jurisdiction (state or province) code (alphanumeric); the allowable subdivision codes will be defined in the FMCSA Code Directory +	2		
				16 (max)		

Commit Level (F/P/N)	Entity	Identifier Name	Identifier Segments	Number of Characters	Reqt Level	Comments
			Driver specific identifier (driver license number) assigned by jurisdiction (alphanumeric)			
NA	Shipment	Shipment Unique ID e.g., 776655443322	Bill of Lading number assigned by the carrier (numeric)	12 (max)	C	Bill of Lading Data will not be stored in CVIEW.
P	Trip	Trip/Load Number e.g., 123456789761231	Carrier DUNS number as assigned by Dun and Bradstreet (numeric) + Trip unique number as assigned by carrier (numeric)	9 6	E	The updated OS/OW system may require a different method of identifying permits/trips.

Notes:

- In accordance with CRF 630, the Driver Unique ID has been updated to split country and subdivision.
- In accordance with CRF 631, the description of Trip/Load Number has been clarified to match IEEE Std 1455-99.
- In accordance with CRF 549, the Transponder ID is specified to be a two-part identifier, with the ID itself in hexadecimal representation.

4. REFERENCES

1. JHU/APL, *ITS/CVO CVISN Glossary*, POR-96-6997 V1.0, dated December 1998.
2. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 1 - Operational Concept and Top-Level Design Checklists*, SSD/PL-99-0243, POR-97-7067 V 2.0, dated August 2000. The latest version will be available on the JHU/APL CVISN website <http://www.jhuapl.edu/cvisn/>.
3. *Reference Deleted*
4. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 2 - Project Management Checklists*, POR-97-7067 P2.0, (Preliminary Version), September 1999. The latest version is available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>.
5. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 3 – Detailed System Checklists*, POR-97-7067 P2.0, dated August 2000. The latest version will be available on the JHU/APL CVISN website <http://www.jhuapl.edu/cvisn/>.
6. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 5 - Interoperability Test Criteria*, SSD/PL-99-0470, (Draft), dated July 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
7. ANSI ASC X12, *Electronic Data Interchange X12 Standards*, Draft Version 4, Release 3, (a.k.a. Release 4030), December 1999.
8. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) Recommendations for Common Carrier, Vehicle, Driver, and Cargo Identifiers*, SSD/PL-99-0388, June 1999. The latest version will be available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>.
9. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume I - IRP Credential Transactions*, ANSI ASC X12 Version 4 Release 3, POR-96-6993 D.5, dated March 2000.
10. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume II – IRP Interstate Credential Transactions*, Draft Version, POR-96-6994 D.2, December 17, 1996.
11. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume III - International Fuel Tax Agreement (IFTA) Credential Transactions*, ANSI ASC X12 Version 4 Release 3, POR-97-6996 D.4, dated March 2000.

12. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume IV - Oversize / Overweight (OS/OW) Credential Transactions*, POR-97-7068 D.3, dated March 2000.
13. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Safety and Credentials Information Exchange (Transaction Set 285)*, POR-96-6995 D.5, dated March 2000.
14. JHU/APL, *Federal Highway Administration Code Directory*, POR-98-7127 D.5, dated March 2000.
15. JHU/APL, *Commercial Vehicle Information Systems and Networks (CVISN) System Design Description*, POR-97-6998 V2.0, (Baseline Version), August 2000. The latest version will be available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>
16. JHU/APL, *CVISN Guide to Top-Level Design*, POR-99-7187, to be published in 1999. The document will be available on the JHU/APL CVISN web site JHU/APL, *CVISN Guide to Top-Level Design, POR-99-7187, P.1*, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
17. JHU/APL, *CVISN Guide to Safety Information Exchange, POR-99-7191, D.1*, March 2000. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
18. JHU/APL, *CVISN Guide to Credentials Administration, POR-99-7192, P.1*, July 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
19. JHU/APL, *CVISN Guide to Electronic Screening, POR-99-7193, D.1*, October 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>]
20. JHU/APL, *Introductory Guide to CVISN, POR-99-7186 P.1 (Preliminary)*, May 1999. [Note: This document is scheduled to be updated in 2000. The latest version will be available on the JHU/APL CVISN Web site <http://www.jhuapl.edu/cvisn/>].
21. American Association of Motor Vehicle Administrators (AAMVA), ANSI D20.1-1993, *States' Model Motorist Data Base, Data Element Dictionary, For Traffic Records Systems*, Second Edition, approved October 11, 1993
22. ASTM Preliminary Standard-111-98, *Specification for Dedicated Short Range Communication (DSRC) Physical Layer using Microwave in the 920 to 928 MHz band*, dated April 1999. For a summary of the standard, see <http://www.its.dot.gov/standard/standard.htm>.

23. ASTM Draft Standard for Dedicated, Short Range, Two-Way Vehicle to Roadside Communications Equipment, Draft 6, dated 23 February 1996.
24. IEEE Standard 1455-99, Standard for Message Sets for Vehicle/Roadside Communications, dated September 1999. For a summary of the standard, see <http://www.its.dot.gov/standard/standard.htm>.
25. JHU/APL, *SAFER System Interface Control Document*, version 2.0, POR-99-7129 D1.0, dated May 1999. The latest version will be available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>
26. JHU/APL, *CVIEW System Interface Control Document*, version 2.0, POR-99-7195 D1.0, dated May 1999. The latest version will be available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>
27. Data Interchange Standards Association (DISA), ANSI ASC X12.3, *Data Element Dictionary*, Draft Version 4, Release 2, document number ASC X12S/98-274, published December 1998.
28. National Safety Council, ANSI D16.1-1996, *Manual on Classification of Motor Vehicle Traffic Accidents*, Sixth Edition, approved October 28, 1996. (Provides “a common language” for users of traffic accident data and is “a standard for statistical classifications for motor vehicle traffic accidents.”)
29. PB Farradyne, SAFETYNET 2000 Data Dictionary Version 0.0.5, published November 1998.
30. JHU/APL, *Delivery of Draft Specification for “Active Sandwich” Protocol for Dedicated Short Range Communications (DSRC) for Commercial Vehicles*, SSD-PL-99-0784, with enclosure *Draft Specification for DSRC for Commercial Vehicles, Version 0.0.1*, November 1999, dated December 1999.
31. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Safety Reports (Transaction Set 284), Volume I – Inspection Reports Transactions*, ANSI ASC X12, Version 4 Release 2, POR-99-7202, D.2, dated March 2000. The document will be available on the JHU/APL CVISN web site <http://www.jhuapl.edu/cvisn/>.
32. Information about contacts regarding the use of TS 151, Electronic Filing of Tax Return Data Acknowledgment, is available at web site <http://www.taxadmin.org/fta/edi/invedi.html>.
33. Information about TS 997, Functional Acknowledgment, is available at web site <http://snad.ncsl.nist.gov/dartg/edi/4010-ic.html>.
34. Information about contacts regarding the use of TS 150, Tax Rate Notification, is available at web site <http://www.taxadmin.org/fta/edi/invedi.html>.
35. Information about TS 813, Electronic Filing of Tax Return Data, is available at web site <http://www.taxadmin.org/fta/mf/>.

36. Information about contacts regarding the use of TS 826, Tax Information Exchange, is available at web site <http://www.taxadmin.org/fta/edi/invedi.html>.
37. JHU/APL, *CVISN Operational and Architectural Compatibility Handbook (COACH), Part 4 – Interface Specification Checklists*, POR-97-7067 D1.0, (Draft), April 1999.
38. JHU/APL, *Delivery of CVISN Electronic Credentialing Preference Survey Results*, SSD-PL-00-0408, with enclosure *Electronic Credentialing Preference Survey Results*, June 2000, dated July 2000.
39. REC-xml-19980210, *Extensible Markup Language (XML) 1.0*, W3C Recommendation, dated February 10, 1998.
40. JHU/APL, *EDI Implementation Guide for Application Advice (Transaction Set 824)*, ANSI ASC X12 Version 4 Release 3, POR-99-7203 D.2, dated March 2000.
41. JHU/APL, *EDI Implementation Guide for Commercial Vehicle Credentials (Transaction Set 286), Volume VII - Electronic Screening Enrollment Transactions*, ANSI ASC X12 Version 4 Release 3, POR-99-7239 D.2, dated March 2000.

Florida CVISN Top-Level Design



Appendix D: References



References

- 1) Cambridge Systematics, Inc. Florida CVISN Business Plan, March 2001.
- 2) Cambridge Systematics, Inc. Florida CVIEW System Plan, March 2001
- 3) Johns Hopkins University Applied Physics Laboratory. CVISN Guide to Top-Level Design, POR-99-7187 (Preliminary), June 25, 1999.
- 4) PB Farradyne, Inc. Florida ITS Strategic Plan, August 23, 1999