

3. WHAT ALREADY EXISTS?

Key necessary components already exist for the carrier, state and CVISN core infrastructure systems. These include legacy credentialing systems, communications systems to exchange information, Internet capabilities, and Web sites to distribute information. In addition there are commercially available products that support CVISN in terms of data mapping and translation between systems. The following sections provide a summary of products used by carriers, states, and the CVISN core infrastructure, plus a summary of the data interchange standards that are the backbone of the CVISN architecture.

3.1 Products Used By Carriers/Applicants

Many large carriers already use sophisticated software packages to support fleet and freight management and administrative functions. Some of those packages assist in the preparation of credentials applications and fuel tax filing.

Service providers offer support for credentials administration to mid-sized carrier operations.

In the future, carriers are expected to be able to obtain CVISN-compatible software from the vendor of their choice. Compliance with the CVISN standards will ensure that it will be compatible with state systems.

An example of a CVISN-compatible software package is the Carrier Automated Transaction (CAT) system. This product allows a motor carrier or service provider to enter credentials applications through a program running on a PC, and then send these applications to the state Credentialing Interface (CI) using a modem, a standard phone line, and, perhaps, an Internet service provider or other network service. The CAT software also processes responses coming back from the CI. FHWA sponsored the proof of concept of PC-based CAT software as part of the Midwest and Southwest One-Stop Shopping operational test projects. States in the CVISN Model Deployment Initiative are sponsoring the development of a CAT for their carriers. For the CAT and CI systems that have been developed to date, all messages passed between CAT and the CI are formatted according to the American National Standards Institute (ANSI) X12 Electronic Data Interchange (EDI) standards. The use of X12 EDI was initially required for the carrier-to-state computer-to-computer interface. However, technology is changing rapidly and the eXtensible Markup Language (XML) has emerged as an alternative to X12 EDI. The use of an open interface standard, other than X12 EDI, is now permissible under the CVISN architecture. Some states that are not already committed to using X12 EDI are now exploring the use of XML, but no CAT software implementing XML is currently available to carriers.

With the development of the Internet and the “information highway,” carriers have access to electronic information exchange via e-mail and various communications protocols. States in the CVISN Model Deployment Initiative are sponsoring the development of Web sites for credentialing. The state-operated Web site will interface with the state's credentialing system. A state-operated Web site will allow a carrier to access electronic credentialing services using a

commercial World Wide Web browser. This makes it possible for them to participate in CVISN with on-site desktop computer hardware and general-purpose, user-friendly software, an option that many carriers can feel comfortable with.

3.2 Products Used By States

Most states today have extensive information systems used to process all the credentialing aspects of commercial motor vehicle operations. The state processes the applications with a combination of manual and automated processes. Often some sort of invoicing and payment is involved, which may or may not use electronic payment mechanisms.

Commercial products and service providers are available to support different credentialing activities such as:

- IRP
- IFTA registration and tax filing
- oversize and overweight permitting
- hazardous materials permitting and route planning

CVISN Model Deployment Initiative states are working with commercial vendors to enhance their products to use open interface standards, and are upgrading their home-grown (legacy) credentialing products to support new interfaces and new operational concepts. Most of the existing state systems will fit in with the CVISN architecture with the introduction of either a legacy system interface, or a legacy modification which would allow the EDI or other open standard data format to be translated into a form required by a particular system. Some CVISN states are exploring use of the World Wide Web for electronic credentialing.

In the CVISN prototype effort, the state Credentialing Interface software package (CI) was developed to facilitate the flow of credential data from input (the carrier) to its destination (the legacy credentialing systems). If a state implements a computer-to-computer interface, credential applications may be entered by the carrier through a CAT and sent to the state CI. If a state implements a Web site for credentialing, the application information entered by the carrier via a Web Browser will also be sent to the state CI. The CI provides a single point of contact for receiving all commercial vehicle credentials applications. The functions performed by the CI are these:

- receive, parse, and acknowledge application
- maintain status information on transaction processing
- validate certain aspects of the application data and eligibility of applicant
- check carrier, vehicle, and account information for consistency with data on file
- route data to appropriate legacy systems and translate formats as needed
- route invoices, e-credentials and other transactions from legacy systems back to the carrier system

- manage interfaces with legacy systems
- maintain logs and archives
- display and print application data, transaction status, and log/archival data

Commercial vendors are available to develop and implement state-specific requirements.

3.3 CVISN Core Infrastructure Systems

The Safety and Fitness Electronic Records (SAFER) system collects and distributes snapshots. Snapshots contain safety and credentials information and support safety assurance, credentials administration, and electronic screening activities.

The IRP Clearinghouse supports the IRP base state agreement. The IRP Clearinghouse streamlines the exchange and reconciliation of registration information and fees by:

- enabling jurisdictions to electronically exchange motor carrier and fee information between jurisdictions
- providing an electronic remittance netting function with concurrent Electronic Funds Transfer (EFT) capability through a central IRP bank
- tracking all amounts due to/from a base jurisdiction, from/to all foreign jurisdictions
- providing reports on the information exchanged and netted fees processed

The IRP Clearinghouse uses the AAMVAnet AT&T Global Network Systems Network Architecture (SNA) for communication. Network Job Entry (NJE)/Remote Job Entry (RJE) is used for batch transfer. 3270 terminal emulation is used for interactive inquiries. E-mail or fax services are used for notifying jurisdictions of Clearinghouse updates and issues. To keep the network from clogging, some transfers from jurisdictions to the clearinghouse are done in batches, which can be transferred in approximately two hours over the existing network. Longer transfers are accomplished using removable media. More information about the IRP Clearinghouse can be found at <http://www.aamva.org/IRP/public/html/projects/clear.html>.

The IRP Clearinghouse is fully operational now. Currently, 19 of the 56 IRP jurisdictions are members of the IRP Clearinghouse; however, 70% of the IRP jurisdictions plan to participate in the Clearinghouse by the end of 2000. Today, there are 15 jurisdictions that are actively participating in the Clearinghouse, electronically exchanging registration information and fees. These fifteen jurisdictions include Arizona, British Columbia, Georgia, Idaho, Kansas, Kentucky, Maine, Maryland, Minnesota, Montana, Nebraska, Nevada, Vermont, Virginia, and West Virginia. Within the next several months Arkansas, Mississippi, New Hampshire, New Jersey, New Mexico, New York and Washington, who have attended the Clearinghouse training, are expected to become active Clearinghouse participants, too. Preliminary discussions are underway regarding implementing a data interface between the IRP Clearinghouse and SAFER.

The IFTA Clearinghouse supports the IFTA base state agreement. The IFTA Clearinghouse was devised to replace paper exchange of data with automated exchange to support business processes. The Clearinghouse will store information regarding carrier demographics and transmittal records. This information will only be shared by participating jurisdictions, except for reports that will be generated and distributed by IFTA, Inc. The Clearinghouse will also provide readily available information on carriers.

The IFTA Clearinghouse provides a client/server approach using Dial-up communication access methods. The clients will be able to send their files to the Clearinghouse using the File Transfer Protocol (FTP). The upload process will consist of X12 EDI files created at the jurisdiction, then sent to the IFTA clearinghouse database. Jurisdictions will be responsible for updating the IFTA Clearinghouse database with registration and tax filing information on a timely basis. An Open Database Connectivity (ODBC) connection to the IFTA Clearinghouse database is provided to allow ad hoc query/reports capability. In the future, jurisdictions may be able to download an “extract” file containing all demographic data submitted by all participating jurisdictions in X12 EDI format. More information on the IFTA Clearinghouse can be found at the IFTA Web Site <http://www.iftach.org/>.

The IFTA Clearinghouse went into production in July, 2000. As of mid-July, Maryland is sending daily updates of demographic/licensee data to the IFTA Clearinghouse. Rhode Island and Ohio have also registered to use the Clearinghouse.

The Commercial Driver’s License Information System (CDLIS) was developed to support the commercial driver’s licensing process performed by the states. CDLIS is a transaction routing (or “pointer”) system that permits states to share CDL information. More information on CDLIS can be found at <http://www.aamva.org/aamvanet/Driver/appCDLIS.html>. CDLIS has been operational since 1992.

NMVTIS is the National Motor Vehicle Titling Information System. The American Association of Motor Vehicle Administrators (AAMVA) is developing this system. The initial focus is not on commercial vehicles. NMVTIS will allow jurisdictions to verify the validity of titles prior to issuing new titles. More information on NMVTIS can be found at <http://www.aamva.org/aamvanet/Vehicle/NMVTIS.htm>.

3.4 Data Interchange Standards

When the CVISN architecture was baselined in 1996, it focused on the use of ANSI ASC X12 EDI transaction sets for carrier – state credentialing interactions. With the explosion of Web services and Internet popularity over the past few years, FMCSA has reviewed its EDI policy and surveyed CVO stakeholders on electronic credentialing preferences (Reference 59). The new policy will be that FMCSA requires that states implement either a person-to-computer or a computer-to-computer interface. FMCSA also 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.

Certain X12 EDI transaction sets are part of the CVISN architecture. The CI and CAT use transaction set (TS) 286 for processing credential applications and returning credentials data. In addition, TS 813 and TS 150 are used for IFTA Quarterly Tax Filing. TS 997 is used to functionally acknowledge that a transaction is received, and to report syntax problems. TS 151 is used as an application-level acknowledgment, and to report problems with tax filings. When the analysis of financial system interfaces is completed, the CI may also be required to process TS 820 for Electronic Funds Transfers (EFTs). The following transaction sets support credentials administration:

TS 150	Tax Rate Notification
TS 151	Electronic Filing of Tax Return Data Acknowledgement
* 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 826	Tax Information Exchange
* TS 824	Application Advice
TS 997	Functional Acknowledgement

(means primarily used for safety assurance and electronic screening; the transaction sets so marked indirectly support credentials administration since credentialing systems supply information for snapshots)*

Commercial products are available that map standard data formats to and from the format required by the standard, if necessary. For instance a state legacy system interface (LSI) could process a TS 826 message into the format required by a legacy processing system, and re-map the output to a TS 286 to interface with other CVISN components.

Implementation Guides (see references) are available for the transaction sets currently used in CVISN.

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