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Oregon Department of Transportation, Motor Carrier Transportation

CVISN

About CVISN

Commercial Vehicle Information Systems and Networks - CVISN

Oregon, like most states, is working to enhance highway safety, better manage an increasing stream of truck traffic, and modernize the way it does business with other states and with commercial vehicle operators. The Federal Motor Carrier Safety Administration (FMCSA) seeks to help with its Commercial Vehicle Information Systems and Networks (CVISN) Program. States participating in the CVISN program strive to make advancements in three areas of business that primarily involve the exchange of information:

• Electronic Screening   • Safety Information Exchange   • Electronic Credentialing

In recent years, Oregon has independently made advancements that are both in step with the CVISN program and meet or exceed its goals. Check a CVISN Status Report - http://egov.oregon.gov/ODOT/MCT/CVISNstatus.pdf - updated in October 2004.

Oregon has made significant advancements related to Electronic Screening of truck traffic and is far ahead of most states in its deployment of intelligent transportation systems. Visit the Green Light Weigh Station Preclearance Program Web site - http://www.oregon.gov/ODOT/MCT/GREEN.shtml - for information about the 22 weigh stations that use high-speed weigh-in-motion scales and transponder readers to preclear trucks.

In May 2006, a total of 4,000 trucking companies had 38,300 Green Light transponders in their trucks so they can save time otherwise wasted stopping at Oregon weigh stations. Since January 1999, these truckers have precleared Oregon weigh stations well over 6.7 million times, saving well over $37 million in operating costs and 500,000 hours of travel time.

Green Light follows CVISN designs for electronic screening in that it performs a virtual real-time check of truckers´ safety records and credentials status every time they approach a weigh station. Oregon´s statewide network of computers allows for updates of carrier records every four hours. Most states just perform an initial screening of applicants to see if they qualify for their program and then follow-up with manual checks of safety and credentials records on a monthly or quarterly basis.

Oregon is in step with most states in the advancements it has made related to Safety Information Exchange. There are about 500 trained and certified safety inspectors at work in Oregon today and in calendar year 2005 they checked 55,840 trucks and drivers, essentially at a rate of 1 every 9.5 minutes (see more safety statistics - http://www.oregon.gov/ODOT/MCT/SAFETY.shtml) In the inspections, critical safety violations were found in 24.32% of vehicles and 8.60% of drivers (current national rates are 22.92% and 6.78%, respectively).

State inspectors use computers with the Inspection Selection System (ISS) to target high-risk trucks. Laptops with ASPEN software record the details of more than half of all inspections. Because most of its

data originates in electronic form, Oregon ranks as one of the best states in terms of speedy upload of information to the national SafetyNet databank. Also, because of its reliance on ISS and because it has assigned a U.S. DOT number to all intrastate carriers, Oregon has one of the lowest "non-match" error rates of all states submitting information to SafetyNet.

As evidence of Oregon´s safety assurance efforts, it is one of just a few states that receive all "incentive" federal grant funds available to them from the Motor Carrier Safety Assistance Program (MCSAP). To receive the full allotment of these extra funds, states must show improvement in: (1) reducing fatalities and fatality accident rates, (2) uploading accident and inspection data to the national databank in a timely manner, and (3) verifying commercial driver licenses during roadside inspections.

In 1998, Oregon stopped work related to Electronic Credentialing because of the need to correct existing computer systems for Year 2000 date problems. But the state is now fully engaged in E-Government initiatives that include electronic credentialing. In October 2001, the Department of Administrative Services (DAS) unveiled Oregon.gov, a portal Web site with access to all state government products and services. The site was redesigned in March 2004. Visit the Oregon E-Government Web site - http://egov.das.state.or.us - for more information.

The Oregon DOT´s Motor Carrier Division has taken a leading role in advancing E-Government. Its Trucking Online Internet-based service - http://www.oregon.gov/ODOT/MCT/TOL.shtml - started in January 2003 with a program for issuing the paper credential most trucks carry when operating in Oregon. Companies use Visa or MasterCard to pay for the credential, or they charge to their account if authorized to do that. New programs have been steadily added to streamline other business transactions. In May 2006, more than 9,100 trucking companies were signed up to conduct business online, including 2,472 Oregon-based companies. Since January 2003, these companies have used a home or office computer for more than 588,000 transactions or record inquiries that formerly required a phone call, fax, mail delivery or field office visit. The Motor Carrier Division is counting on trucking companies to shift as much business as possible to the Internet so it can improve its service to those who still must do business by phone, mail, or in person.

Motor Carrier Division efforts in this regard date back to March 2000 when it conducted a survey of big and small trucking companies to gauge the level of interest in the computerization of business transactions. The survey found 70-80% of the largest companies operating in Oregon, and 40-50% of predominantly smaller Oregon-based companies, either definitely would or probably would conduct their trucking related business online if they could.

General CVISN Criteria

As of the 3rd Quarter 2005, following is a summary of Oregon´s progress meeting the basic CVISN criteria as originally outlined by the program:

CVO Business Plan, CVISN Planning and Workshops – Oregon was one of the first to complete a CVO State Business Plan, complete the CVISN Workshop Series, and complete a Top-Level Design and CVISN Program Plan approved by FMCSA.

CVISN Core Checklist – Oregon has not completed the Core Checklist documenting compliance with CVISN Design Criteria and completion of interoperability and SAFER Interface tests.

Adopt Standard Identifiers – Assigning a U.S. DOT number is a routine part of the initial registration and processing of every new Oregon-based trucking company. In January 2003, Oregon began issuing U.S. DOT numbers with an OR suffix if the carrier operates only intrastate. In the past, only carriers that operated interstate were required to have a number. Extending the requirement to intrastate carriers makes it possible for their safety inspection records to be entered into the SafetyNet national databank. Now safety inspectors can check the databank and find records for both interstate and intrastate carriers, which greatly enhances their ability to identify high-risk ones.

The U.S. DOT number is an example of the standard identifiers that CVISN seeks to establish. CVISN has set national standards for unique identifiers related to the following:
• Carrier ID (19 alphanumeric characters)
• Vehicle ID (17 alphanumeric characters)
• Driver ID (20 alphanumeric characters)
• Cargo ID (16 characters - all numbers)
• Trip ID (15 characters - all numbers)

When every dataset that contains information about an entity follows these standards, computer systems throughout the country can interact to the benefit of all business processes.

Use Electronic Data Interchange Transactions – Oregon demonstrated an ability to meet this criteria years ago when the ODOT Motor Carrier Transportation Division (MCTD) began inviting trucking companies to report weight-mile taxes using electronic data interchange (EDI) and automated debit processes. EDI is the electronic exchange of information in a format that permits computer generation and processing of the message. The debit process, called Automated ClearingHouse (ACH), involves authorizing the state to withdraw funds from a designated company bank account.

For the EDI/ACH service, MCTD created software that allows a carrier to use a home or office computer to prepare a tax report that looks just like the standard paper form and send it electronically. To transmit the report and payment, however, carriers had to subscribe to a Value Added Network (VAN). MCTD found that many carriers were reluctant to pay the VAN set-up fee (about $300) and subscription charges (annual or monthly fees plus other charges, such as 50 cents to transmit an electronic filing). Others were very reluctant to agree to automatic debits from their bank account. For a time, the system was used by one reporting service that was filing reports for about a dozen carriers. The system could be used today, although EDI/ACH technology is now considered outdated. Until June 2004 when it developed a Trucking Online application - http://egov.oregon.gov/ODOT/MCT/TOL.shtml - for tax reports and payments, MCTD distributed the tax reporting software to several companies on CD-ROM.

CVISN originally imagined that widespread use of EDI would reduce or eliminate paper transactions and allow automated processing and storing of data. CVISN designs generally called for information to be transmitted and exchanged using American National Standards Institute (ANSI) Electronic Data Interchange (EDI) American Standards Council (ASC) x12 transaction set 285. CVISN System Architects later began advancing designs for information to be transmitted and exchanged through deployment of less expensive Internet-based computer systems, which Oregon has now implemented.

Demonstrate Interoperability – "Interoperability," in the context of CVISN, refers to the ability of computer systems to work together and routinely share data. This allows for a smooth exchange between those that need information (users) and those that have it (authoritative or indirect sources).

Oregon was one of the first states to demonstrate a willingness to meet this criterion for interoperability. In 1996 it joined with neighboring states, Idaho, Washington, and Utah, to form the Multi-jurisdictional Automated Preclearance System (MAPS). One of the primary goals was to exchange information to allow truckers to enjoy interoperability between the states´ electronic screening systems. Oregon was an original, albeit unofficial, partner in a larger group of states that sought to work toward this same goal on a more national level. The partnership, officially called the North American Preclearance and Safety System (NORPASS), represented a merger of Oregon Green Light, MAPS, and the Advantage CVO Program that was established by a number of Eastern states. Early in 2000, Oregon withdrew from participation in the organization when NORPASS states ratified a restrictive transponder interoperability agreement with HELP, Inc. The agreement stipulated that transponder owners, rather than transponder users, have the right to determine where transponders are used. Oregon considered that to be one more institutional barrier to transponder interoperability.

Electronic Screening Criteria

Follow Federal Guidelines for DSRC Equipment – The Oregon Green Light Weigh Station Preclearance System - http://www.oregon.gov/ODOT/MCT/GREEN.shtml - employs Dedicated Short Range Communications (DSRC) transponders (currently the Mark IV model) that are mounted on truck windshields. The transponders are compatible with the country´s other two preclearance programs – PrePass and NORPASS – and they allow a carrier to enjoy interoperability between the different systems.

In late-1999, California and the other states that make up HELP, Inc. (Heavy vehicle Electronic License Plate), which authorizes Affiliated Computer Services to run its PrePass system, agreed to let carriers use Oregon Green Light transponders in PrePass if they agree to the terms and conditions of that pay-for-pass program. However, HELP prohibits carriers from using PrePass transponders in Oregon. This makes for what some call "one-way interoperability" between the systems.

In February 2001, Oregon filed a Declaratory Judgment Action Complaint in U.S. District Court asking if Oregon would be violating any federal or state law or regulation if it enrolled the ID code from a PrePass transponder in Green Light. Oregon sought to use the PrePass transponder in Green Light, but only at the request of a carrier with one of those transponders. After a Summary Judgment hearing in April 2002, the judge dismissed the case and declared it a tie. He said it would be unwise to declare that Oregon´s proposed action would not violate any federal right of HELP, the owner of PrePass transponders. He refused to rule on the question of whether Oregon´s use of PrePass transponders would violate the Credit Card Fraud Act. The judge also refused to rule on whether use of PrePass transponders would constitute tortious interference in the contract between HELP and its transponder users. As a result of the non-decision in court, Oregon continues to stop every PrePass transponder-equipped truck when it approaches a Green Light weigh station, regardless of whether the truck is safe, legal, and qualifies for preclearance.

Use Carrier and Vehicle Snapshots to Support Screening Decisions – Oregon has a rich database of information about carriers operating in the state. This unique computer system has the same functionality of a Commercial Vehicle Information Exchange Window (CVIEW), which CVISN requires states to develop. The Oregon version is fully capable of supporting screening decisions in the Green Light weigh station preclearance program. It produces its own electronic "snapshots" of information about a carrier and its vehicles, although it is not the exact kind of snapshot imagined by the CVISN program. Carriers participating in Green Light can be precleared and directed to pass weigh stations at highway speed if they successfully complete an instantaneous computer check of vehicle size and weight compliance, carrier registration and tax status, and carrier safety risk rating status (carriers with an unsatisfactory safety rating, and carriers participating in the PRISM safety improvement program, are not precleared).

Green Light follows CVISN designs for electronic screening in that it performs a virtual real-time check of truckers´ safety record and credentials status every time they approach a weigh station. Oregon´s statewide network of computers allows for updates of carrier records every four hours. Most states just perform an initial screening of applicants to see if they qualify for their preclearance program and then perform manual follow-up checks of credentials and safety records on a monthly or quarterly basis.

Unlike Oregon, most states don´t have a rich database of information about carriers. That´s why states must develop a CVIEW system to manage both the snapshots of information about intrastate carriers and, through a subscription link to the Safety and Fitness Electronic Records (SAFER) system, snapshots of information about interstate carriers.

CVISN snapshot records related to safety would relay the following information to support decisions for screening a specific vehicle: • The carrier´s current safety rating. Oregon´s computer files include a field showing each carrier´s rating, if they have one.   • A historical review of the carrier´s safety record. Oregon´s computer files include fields showing each carrier´s vehicle and driver out-of-service percentages.   • A summary of the carrier´s accident/inspection/violation history and a summary of the inspection/violation history of the vehicle being screened. Oregon´s computer files include a field showing each carrier´s SafeStat score, if they have one.   • An overview of the last safety inspection for the vehicle being screened. This kind of vehicle specific information is not readily available to any state except through use of the Past Inspection Query function of SAFER.   • A record of the last time the carrier´s vehicle and/or driver was placed out-of-service and the last time the vehicle being screened was placed out-of-service. This kind of

vehicle and driver specific information is not readily available to any state except through use of the Past Inspection Query function of SAFER.   • The expiration date of any Commercial Vehicle Safety Alliance decal on the vehicle being screened.

Implement Interoperability Policies – Oregon met this criterion in 1996 when it entered into a Base-State Agreement with Idaho, Utah, and Washington, together as the Multi-jurisdictional Automated Preclearance System (MAPS). In March 1998, MAPS and Advantage CVO signed an Interoperability Agreement to let carriers operate without unreasonable difficulties between those two systems. In July 1999, Oregon unofficially joined with a larger group of states that sought to work toward common goals on a more national level. The partnership, officially called the North American Preclearance and Safety System (NORPASS), represented a merger of Oregon Green Light, MAPS, and the Advantage CVO Program that was established by a number of Eastern states. Oregon withdrew from the organization when it ratified a restrictive transponder interoperability agreement with HELP, Inc. The agreement stipulated that transponder owners, rather than transponder users, have the right to determine where transponders are used. Oregon considered this to be one more institutional barrier to interoperability.

Safety Info Exchange Criteria

Use ASPEN At All Major Inspection Sites – Oregon uses Aspen software to record more than half of all truck and driver safety inspections conducted in the state. The software is installed on laptop computers, including many used by State Police, County Sheriffs, and City Police that work under contract in the Motor Carrier Safety Assistance Program. The software is also installed on desktop computers inside inspection buildings at Oregon´s six Ports of Entry. Widespread use of this software enables Oregon to speedily upload inspection records and do its part to complement the national SAFETYNET database of information.

Maintain / Exchange Carrier Safety Summary Data Using Snapshots – Oregon inspectors use computers that access the SAFETYNET database of records and they rely on the Inspection Selection System to identify high-risk carriers that need their attention. They also routinely access the national Safety and Fitness Electronics Records (SAFER) system to check carrier-specific information. But the safety database that inspectors access on portable computers at the roadside does not contain the most recent inspection records (last day, last week, or even last month at certain times), which is one CVISN goal for information exchange.

In the future according to CVISN, inspectors throughout the country will have real-time computer access at the roadside to much more extensive safety records that include the following: • Information about the motor carrier, including its safety risk rating and credentials information.   • Information about the carrier´s vehicles, including vehicle safety records and credentials. Inspectors will be able to check the out-of-service status and percentage for the vehicle and see information equivalent to an electronic Commercial Vehicle Safety Alliance (CVSA) decal.   • Information about the carrier´s drivers, including driver safety performance and credentials. Inspectors will be able to check the out-of-service status and percentage for the driver.   • Information about the vehicle and the cargo it carries, particularly specially regulated loads like hazardous materials, the results of the last screening event.

Maintain / Exchange Carrier and Vehicle Credentials Data Using Snapshots – Oregon has a rich database of information about trucking companies that do business in the state because Oregon charges a weight-mile tax that requires more recordkeeping and auditing by the state. As a result, Oregon has access to extensive information about interstate and intrastate carriers, including carrier- and vehicle-specific registration and tax data, and enforcement officers at Ports of Entry and weigh stations can quickly verify credentials. Oregon´s system essentially produces an electronic "snapshot" of credentials data for carriers and their vehicles, although it is not the classic Commercial Vehicle Information Exchange Window (CVIEW) envisioned by CVISN.

Use CVIEW – Oregon has not developed a Commercial Vehicle Information Exchange Window (CVIEW) system, which is a computer system that manages information about both interstate and intrastate carriers

operating in the state. For most states, this is one of the most important concepts of CVISN. It is designed to be a system that resides in each state in order to pool and collect information from various other systems related to commercial vehicle safety, credentialing, and taxation.

Oregon doesn´t have a CVIEW system as envisioned in CVISN, but it has a rich database of information about trucking companies that do business in the state because Oregon charges a weight-mile tax that requires more recordkeeping by the state. As a result, Oregon has access to extensive information about interstate and intrastate carriers, including carrier- and vehicle-specific registration and tax data, and it produces its own "snapshots" of carriers operating in the state.

Credentials Admin Criteria

Support Electronic Credentialing for IRP – Oregon has expanded its Trucking Online service - http://egov.oregon.gov/ODOT/MCT/TOL.shtml#Services_Available - to include applications that allow a motor carrier to use a home or office computer to register to operate in other states under the International Registration Plan (IRP). Oregon's system now includes a connection to the IRP Clearinghouse - http://www.aamva.org/IRP/projects/mnu_proClearingHouse.asp - so the state can transmit vehicle registration information and fees to the Clearinghouse rather than to the individual states and provinces involved. The Clearinghouse is designed to periodically summarize new registrations and compute net fees due for each jurisdiction, as well as distribute the information and fees. Oregon's system updates information about a carrier, its vehicles, and credentials, review fees billed, and supports electronic fee payments.

Support Electronic Credentialing for IFTA – Oregon plans to expand its Trucking Online service to include applications that allow an Oregon motor carrier to use a home or office computer to complete credentialing transactions related to operating in other states under the International Fuel Tax Agreement (IFTA). It's expected that such electronic credentialing will be ready in 2006. Oregon's system will include a connection with the IFTA Clearinghouse, which is designed to allow each state to access a single database for processing fuel tax returns, calculate net amounts due to and from a base jurisdiction, electronically transfer funds, resolve discrepancies, electronically track fuel taxes between a base jurisdiction and a reporting jurisdiction, maintain related information, and electronically distribute fuel tax data. Oregon's system will update information about a carrier and its credentials and retrieve tax rate information from the Clearinghouse.

Background

CVISN started in 1996 as a Model Deployment Program with eight pilot states participating, including a partnership of Washington and Oregon. In the first two years of the program, the Federal Highway Administration contracted with the Johns Hopkins University Applied Physics Laboratory for extensive work related to planning and coordination. Johns Hopkins staff still maintain a CVISN Web site – http://cvisn.fmcsa.dot.gov/ – replete with background information about the program as they designed it.

Oregon originally volunteered to be a pilot CVISN state because it was already committed to the deployment of intelligent transportation systems for the benefit of both government and industry, having completed a Strategic Plan in 1993. Most notably, through its Green Light Weigh Station Preclearance Program - http://www.oregon.gov/ODOT/MCT/GREEN.shtml - Oregon was well on the way to demonstrating how to modernize truck weigh stations with high-speed weigh-in-motion scales and automatic vehicle identification devices. Screening truck traffic electronically was to be one primary CVISN objective, along with utilizing computers to improve safety inspection processes and inventing computer systems to automate credentialing processes.

Of the states that answered the FHWA call for interest in CVISN, Oregon and Washington were the only

ones to submit an application together as a partnership. They were one of seven pilots selected in 1996 and until 1998 they worked together in a number of ways, while also proceeding with plans as if they were individual pilot states.