

Facilitating, Promoting, and Monitoring the FAST Program in the Cascade Gateway

A discussion summary for the TRB North American Freight Flows Conference.
Border Crossing Data session

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Abstract

This presentation will review various data sources and data-collection efforts used to inform analysis and decision making related to the Free and Secure Trade (FAST) program in the Cascade Gateway – the four land-border ports-of-entry that connect Western Washington State and Lower Mainland British Columbia. Data sources will be related to binational, multi-agency operational objectives and specific information needs. In addition to sharing information about some regional data-collection practices and applications, this overview is expected to stimulate discussion of ways to improve data collection, storage, and distribution as well as illustrate how improved, data-driven information can foster policy discussions and consideration of operational alternatives.

Introduction

The Whatcom Council of Governments (WCOG) is a U.S. metropolitan planning organization (MPO) in Bellingham, Washington, the county-seat of Whatcom County. With financial support from FHWA's Coordinated Border Infrastructure (CBI) program, Washington State, local jurisdictions, and Canadian agencies, and countless hours of participation by agency representatives, WCOG has served as the lead agency for the International Mobility and Trade Corridor Project (IMTC) for 11 years. IMTC is a binational planning coalition focused on the Cascade Gateway. Participating agencies and entities include regional offices of federal inspection agencies, state and provincial transportation agencies, consulates, local jurisdictions, industry associations, non-governmental organizations, and others.

Over its 11 year history, IMTC agencies have worked to improve the Cascade Gateway's transportation and inspection systems with improvements to infrastructure, operations, and information technology. The full scope of these objectives required improvements to data-collection, information development, and information sharing.

Looking back over the last six years and more specifically at how IMTC agencies have supported advancement of the FAST program provides an informative case study about how various data sources have been used to inform investment and operational decisions by U.S. and Canadian entities focused on one region's border-crossing system.

After a brief review of the FAST program in general, this summary will cover the FAST program as deployed at the Pacific Highway port-of-entry. This will provide opportunities to highlight specific data needs and solutions that are the focus of this TRB conference, as well as make illustrative connections between data-quality and system-optimization.

The FAST program

The Free and Secure Trade Program (FAST) is a U.S.-Canada response that arose from the Smart Border Declaration (SBD) – a binational, executive-level policy response to the terrorist attacks of 9/11 that was signed in December of 2001. FAST was subsequently unveiled a year later in December, 2002.

The goal of FAST is to improve security and efficiency by encouraging those engaged in cross-border freight movements to apply for conditional pre-approval and corresponding access to dedicated, expedited inspection-lanes at ports-of-entry.

Some program requirements and strategies are important to mention here. First, dedicated access lanes are needed. This is a significant investment in infrastructure that requires partnership between inspection agencies and, at a minimum, whoever owns the road approaching the inspection facility.

Next, as alluded to above, the program was rolled out as a binational undertaking to embrace the economies of scale offered by the United States and Canada’s similar security objectives, legal systems, and many other social alignments (i.e. language).

A third notion about how the program might unfold was that FAST-enrolled carriers and drivers would be more highly desired by shippers and even able in some cases to charge higher rates for predictably shorter transit times.

A layer deeper

It is critical to point out that the singular “FAST” label does not correspond to a single, binationally administrated inspection program (as is the case with NEXUS for passenger vehicles).

Three components of a truck-borne freight movement must be pre-approved and enrolled in the pertinent FAST-related program in order for that truck to enter the U.S. or Canada via a FAST lane. These three components are 1) the driver, 2) the carrier (the owner of the truck/trucking firm), and 3) the shipper (the owner of the goods being exported).

The program for truck drivers is a binationally administered. For carriers and shippers, each country has one national program for each. The array of programs operating under the FAST umbrella is shown in the following table.

	United States Customs & Border Protection	Canada Border Services Agency
Driver	FAST Driver Card – binational	
Carrier	C-T PAT carrier	CSA
Shipper	C-T PAT shipper	PIP

Some operational conclusions from this arrangement are:

- A loaded truck seeking FAST-lane access in *one direction* (into the U.S. or into Canada) must be associated with three program enrollments.
- A loaded truck seeking FAST-lane access in *both directions* must be associated with five program enrollments.

- Empty trucks in the above scenarios can use the lane with two enrollments, the driver and the carrier, since there is no shipper involved in the movement.
- Trucks carrying shipments from more than one shipper (FedEx, UPS, and many other general-freight less-than-truckload carriers) cannot use the FAST lane unless all shippers with goods on board are registered with the directionally appropriate shipper program.

FAST related partnerships and investment at the Pacific Highway port-of-entry

The U.S. port-of-entry was rebuilt in 1999. As part of the re-build, commercial-vehicle booth capacity went from two to three booths. Following designation of one of the three booths as a future FAST lane, IMTC partners set out to design and fund widening of British Columbia Highway 15 to accommodate an additional lane that would enable FAST trucks to get by the typical long queue of regular truck traffic. The successful completion of widened and reconfigured approach lanes for the U.S. port was completed in 2004 as a result of interagency partnership and funding from both U.S. and Canadian sources. The FAST lane at U.S. CBP's Pacific Highway port opened in November 2004.

The CBSA port at Pacific Highway added a third truck booth in 2007. This addition was made as the Washington State Department of Transportation (WSDOT) completed a full rebuild of Highway 543, the one-mile connection between Interstate 5 and the Pacific Highway port. The rebuild was completed in December 2007 and included a dedicated, northbound FAST lane which CBSA immediately opened for business.

Marketing FAST in the BC-WA region – a need for data

For both the security objectives and the cross-border transportation efficiency objectives, it is important to attain a sufficient shift in traffic into the FAST lane. To help achieve this, the Whatcom Council of Governments received funds from the U.S. Federal Highway Administration and the BC Ministry of Transportation to pursue outreach and marketing in cooperation with IMTC agencies including U.S. CBP and CBSA.

Who do you reach out to? We focused primarily on carriers. WCOG asked U.S. CBP and CBSA if student-observers could be stationed near truck-booths to manually record the observable names of carriers (from tractor doors, etc.). This data would be summarized to identify the carriers who made the most cross-border trips—the target market whose use of the FAST program would have the largest benefit to security and system capacity. While CBP agreed to this method, they offered instead to allow WCOG to extract carrier names from manifests – the document that carriers submit for each shipment entered into the United States.

Summarization of this data confirmed that a minority of carriers make the majority of trips. WCOG bundled carrier names and addresses and both CBP and WCOG conducted follow-on outreach with these firms (CBP directly, WCOG indirectly).

FAST participation rates at Pacific Highway

According to U.S. CBP, when the FAST lane is truly open to FAST trucks only (it is opened to all trucks from time-to-time to help relieve very long queues) the share of

trucks that enter as FAST trucks from BC Hwy 15 is between 15 and 20 percent. It is acknowledged by CBP that most of these trucks are empty.

According to CBSA, the percentage of trucks entering as FAST from Washington State Route 543 is under five percent. There is no protocol for ongoing availability of this measure. Since the FAST lanes are the product of multiple agencies' large investments, improved collection and availability of that information would be welcome.

One metric that was recently made available by CBP Headquarters is the percentage of loaded trucks entering from Canada under the FAST *program* by port location (table below). This data is important for evaluating the relative market penetration by region.

FAST shipments as a percent of all shipments at U.S.-Canada land ports

	Port	# of Lanes	FAST Dedicated Lanes	Estimate FAST as % of all shipments
1	Detroit	14	5	44%
2	Port Huron	3	2	31%
3	Buffalo/Peace Bridge	7	0	23%
4	Buffalo/Lewiston Bridge	4	1	23%
5	Pembina	3	0	21%
6	Alexandria Bay	3	0	20%
7	Champlain	5	1	17%
8	Ogdensburg	3	0	16%
9	Sault Ste. Marie	2	0	15%
10	Derby Line	2	0	13%
11	Houlton	2	0	12%
12	Highgate Springs	1	0	9%
13	Oroville	2	0	8%
14	Blaine	3	1	8%
15	Massena	1	0	5%
16	Sweet Grass	2	0	3%

It is interesting that while Blaine (Pacific Highway) has the fifth highest truck-volume on the U.S.-Canada border, it ranks 13th (tied with Oroville, WA) in percentage of FAST shipments. The top ports by this measure (Detroit, Port Huron, etc. are also among the top volume ports). This kind of data validates a harder look for causes of this different experience.

How much faster is FAST?

Two data-intensive studies provided the Cascade Gateway region a unique opportunity to gauge the impact of FAST implementation on cross-border travel time. The first was conducted by the U.S. Department of Transportation in 2002. This effort included two weeks of multi-point, time-stamped observations of trucks from end-of-queue, through various components of staging and metering, up to and through the primary inspection booth. With the FAST program up and running for about two years, a comparable set of observation was collected in June 2006—an IMTC initiative funded by Transport

Canada, WCOG, and Western Washington University’s Border Policy Research Institute. A comparison of findings is summarized in the table below.

2002 vs. 2006 truck processing times at the U.S. Pacific Highway land border port-of-entry

Year	Lane Type	Booth Count	Processing Time (seconds)	Capacity (trucks/hour)
2002	All	2	57	126
2006	General	2	120	60
	FAST	1	87	41
	Total	3	109	101
Change		↑ 50%	↑ 91%	↓ 20%

The above table shows that the experience of cross-border freight carriers at Pacific Highway during the implementation of the FAST program has been an overall increase in processing time and a decrease in throughput capacity. Trucks using the FAST lane were not, in 2006, experiencing a shorter processing time than before FAST was offered but were, being processed more quickly than their non-FAST counterparts. While total wait times for the FAST lane were about 20 minutes in 2006 (significantly less than for general lanes) the hope of FAST leading to an overall efficiency increase had not yet occurred in June 2006.

Electronic Manifest

During 2007, U.S. CBP phased in a new requirement for carriers to submit inward shipment manifests electronically. Called e-manifest, it has been described in discussions with CBP as improving the accuracy and efficiency of advanced screening and targeting and also speeding primary-inspection functions at the booth. IMTC agencies are very interested in working with CBP again to gather observational data and understand what the effect of e-manifest has been for processing time both in FAST and general lanes. It is hoped that such an effort will proceed in June 2009.

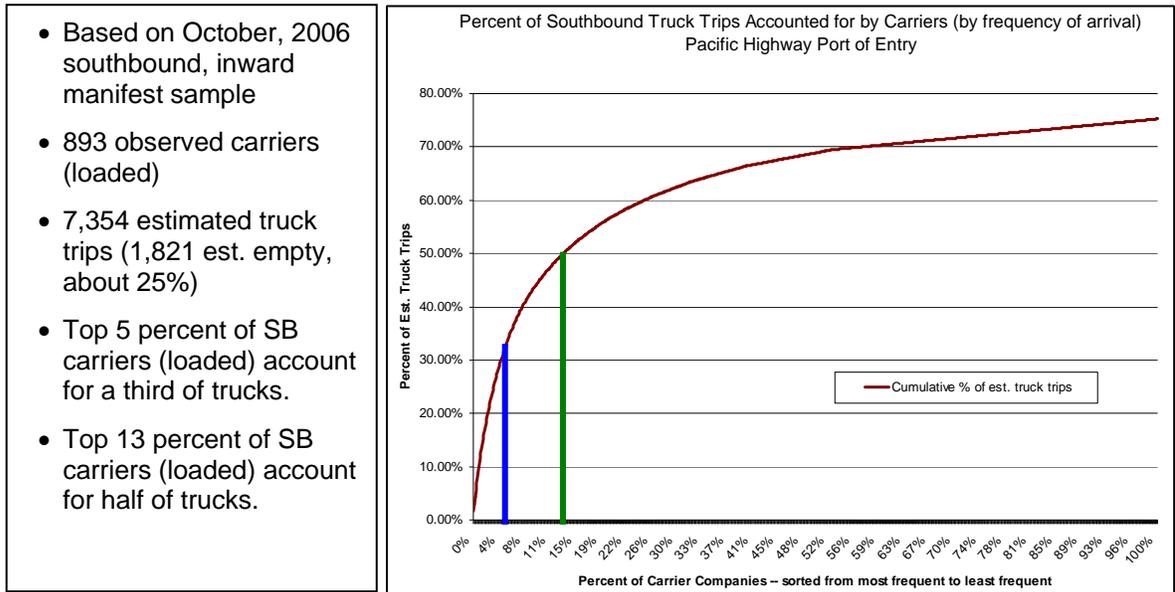
Understanding the regional potential of FAST

With the opening of the Pacific Highway’s northbound FAST lane in December 2007, IMTC agencies wanted to conduct an outreach effort to help speed enrollment and use of the new infrastructure and operational capacity.

Manifest data

Following the marketing efforts of 2004, WCOG had additional opportunities to gather manifest data for U.S. bound shipments entering at Pacific Highway. The chart below summarizes some findings from the sample collected during a week in October 2006.

Summary of October 2006 IMTC Manifest Sample at Pacific Highway (U.S. bound)



The manifest sample not only confirms the existence of a target-market opportunity but also provides the carrier names which WCOG followed up with directly with telephone interviews.

The empty question

As noted above, it was estimated that 25 percent of trucks entered the U.S. empty at Pacific Highway in October 2006. It was additionally noted that most of the trucks in the U.S. FAST lane at Pacific Highway are empty (this assertion is further supported by the headquarters data on FAST shipments introduced above). Because the carrier names collected from U.S. manifests were for southbound shipments—and thus only from loaded trucks—it was presumed that the majority of empty *northbound* movements were made by these same carriers. Carrier interviews (discussed more below) however did not uncover an untapped population of empty carriers who had wanted FAST access. Most carriers denied ever traveling empty. As much as anything, this pointed to the value of improved data that links carriers to shipments – at least by shipper, origin, and commodity type. FAST has proven to be a regional favorite of empty trucks southbound. Additionally, operational alternatives for empty trucks could be better evaluated with historical data on the volumes and trade-lanes.

A source that WCOG is looking to make better use of regarding empty truck frequency and direction are the Piezo weigh-in-motion devices installed on BC Highway 15 very close to the border.

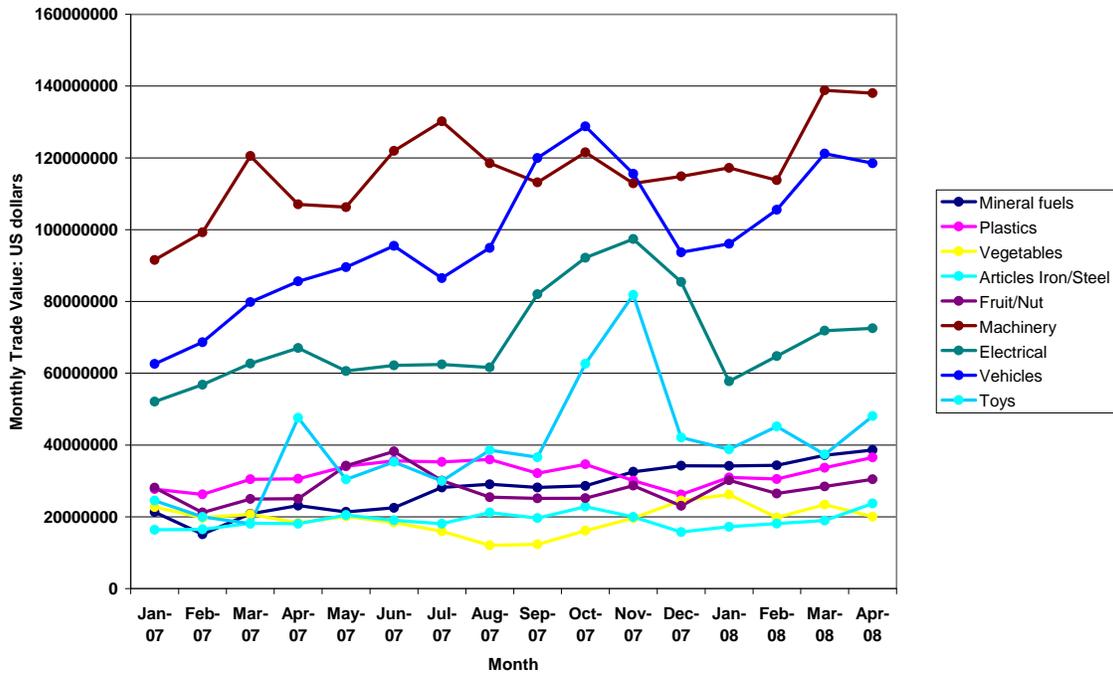
The shipper question

Staying with the narrow focus on CBSA’s northbound FAST lane at Pacific Highway, marketing to shippers was also considered. It was already the sense that effecting the enrollment of shippers for C-T PAT had been a stumbling block in the region. Was there

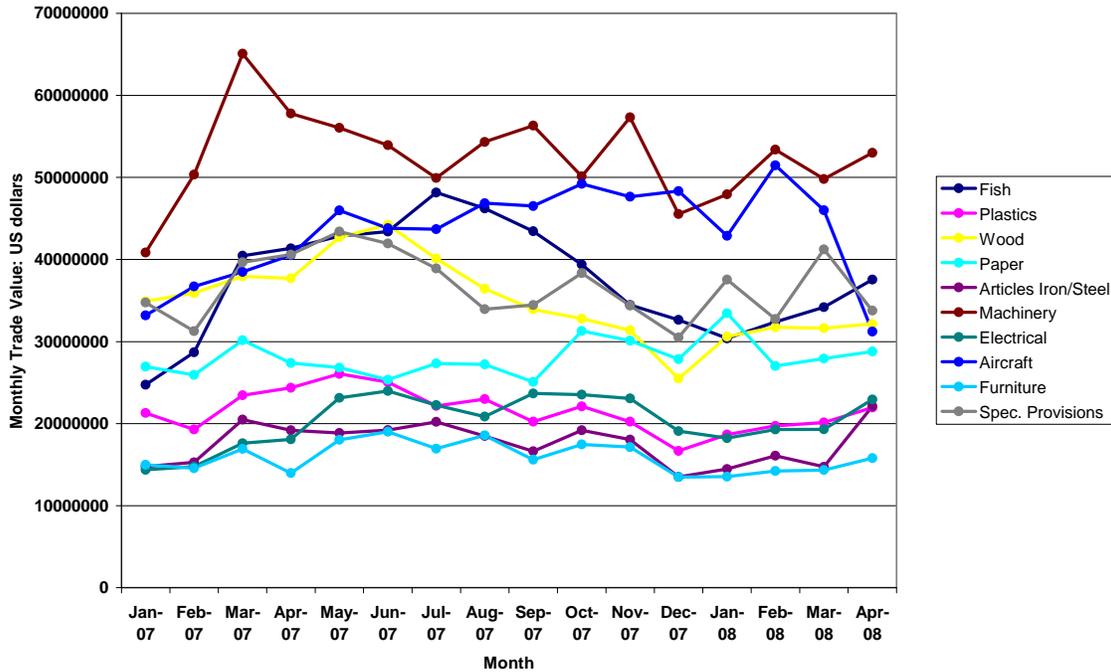
perhaps a different set of commodities moving northbound from different kinds of shippers who might be better aligned with FAST incentives and requirements?

The data that was identified and reviewed for this question was the U.S. Bureau of Transportation Statistics' Trans-border Freight Database (Tbfd). Since January 2007, Tbfd commodity data has been available at the port-of-entry level. A sample of the resulting information is charted below. These two charts include only the top-10 commodities for each direction.

Blaine: Export Value by Commodity



Blaine: Import Value by Commodity



The first thing to note, a data gap really, is that the above comparison of Pacific Highway southbound commodities (U.S. imports) and northbound commodities (U.S. exports), is only available by value (U.S. dollars). The more meaningful metric for gauging FAST opportunities would be weight. Weight is only available for U.S. imports.

We can verify a couple of interesting facts by comparing value. First, while we know that the truck volume going each way is basically the same, the value of goods going to Canada is much higher. This is a clue that empty cross-border trucks are more likely to be southbound over the time-frame shown.

Secondly, there are indeed different commodities in the mix. More study is needed to figure out if the shippers of these commodities are more or less receptive to joining the FAST program. One observation is that even from the value perspective, wood and paper stand out among U.S. imports. These are typically moved in bulk which, because bulk is typically a single-shipper load, avoids the FAST-eligibility complications of less-than-truckload (LTL) carriers. From the admittedly lacking perspective of freight-value, there are signals that northbound FAST aspirants in this region might face more of an LTL challenge than southbound freight movements.

Carrier interviews

Using the list of carriers from the October 2006 manifest sample discussed above, WCOG conducted telephone interviews with 33 companies listed within the top 13 most-frequently arriving carriers.

Summary of interviews with high-volume carriers by WCOG – Summer 2008

Fleet Size	Average = 270, but highly variable.
Percentage of fleet used in cross-border Trade	63%
Freight types Carried Cross-border:	50% were Assorted/LTL
Base of operations:	93% in CAN, 33% of those are in Surrey, BC
Primary Direction of goods:	80% both, 10% southbound, 10% northbound
Vehicle-types used:	Standard Tractor-Trailer combo
Approximate number of Cross-border Shipper clients:	28% of companies had too many to count. Of those who knew, the average was 103 cross-border shipper clients
Enrollment in programs:	C-TPAT= 79%, CSA=62%, PIP=66%
Percentage of Cross-border clients enrolled in programs:	~9%
Percentage of Drivers FAST enrolled:	72%
When using the FAST lane are you Loaded or empty? Northbound:	Loaded = 38%, Empty = 7%, Can't Use = 45%
When using the FAST lane are you Loaded or empty? Southbound:	Loaded = 45%, Empty = 21%, Can't Use = 34%
Which programs was easier to Understand/Apply for:	C-TPAT = 25%, CSA = 75%

The bottom line from the above research is that carriers' clients, the shippers of cross-border goods, have not bought into the FAST programs. Thus, use of the lane by enrolled carriers and drivers is low and the ability of the FAST program to attract continued growth among the very large base of carriers (893 individual companies observed in October 2006) is doubtful.

Discussions with regional CBP and CBSA port directors and with representatives of the British Columbia and Washington trucking associations concurs with carrier feedback indicating that interest in FAST by shippers in the Cascade Gateway region is nil. Additionally, counter to the earlier-mentioned FAST strategy that envisioned approved carriers could better market themselves to cross-border shippers, carriers in the region are not at all inclined to request FAST-enrollment by their clients. The regional market conditions simply are not fostering this kind of dynamic – unlike other regions around eastern U.S.-Canada land-border ports.

Informing evaluation of costs, benefits, and future alternatives

With the current use of the FAST lanes in the Cascade Gateway arguably not accomplishing what was set out to be achieved, recent discussions at IMTC meetings have included ideas including:

- Revised FAST policies that would be more flexible regarding empty trucks.

- Developing policy alternatives for FAST that would acknowledge different regional market structure (production logistics, commodities, etc.)
- Modeling port operations with no FAST lane.
- Looking harder at recent research on how a dynamic congestion-priced lane would work instead of a FAST lane.
- Dedicating a lane as an empty-lane.

Investigation of the above concepts will benefit from the research of other regional partners and current and emerging data sources discussed here.

The Transportation Border Working Group (TBWG) is also advancing the improvement of data extractions from CBP Automated Commercial Environment through the International Trade Data System (ITDS).

Additional research on trucking industry dynamics would also be useful for these analyses. For example, among the carriers interviewed, it is difficult to ascertain in any general way, who is more exposed to variable costs and how this changes over time. Examples of the factors that complicate this include 1) Who owns the truck – the driver or the carrier firm they work for? 2) Who pays for the fuel, the driver or the carrier firm? 3) How is the driver paid – by the hour or by the completed delivery/pick-up run?

Final comments

The Cascade Gateway has enjoyed the cooperation of several agencies in improving the collection and distribution of cross-border transportation-related data. This has resulted from years of cross-border discussion, relationship building, and collaboration on improvement projects. Cooperation on data collection stems from preceding, mutual identification of needed evaluation of improvements. This is to say, as has been said before, that a data-sharing agenda (actually another broad objective of the Smart Border Declaration) is most successful when preceded by institutional relationships. The technical problems are usually small compared to the institutional issues that arise if partnership is sought on the fly.

For questions or feedback regarding this summary please contact:

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