



The Free and Secure Trade (FAST) Commercial
Border Crossing
Hwy 15, BC to Blaine, WA

Project Stakeholders

- Urban Systems
- DMD & Associates
- BC Ministry of Transportation and Infrastructure
- US Customs & Border Protection (USCBP)
- Cobra Electric

Project Primary Objectives

- Provide priority system for “FAST” commercial vehicles
- Improve efficiency for all vehicles in the staging area
- Improve storage capacity in truck staging area



Project Objectives

- Design a control system to provide maximum flexibility
- Provided method for USCBP officials to control & monitoring the system



Project Challenges

- Critical project timeline
- Meet current and future requirements
- Accurately detect vehicles of all sizes
- Driver behavior & enforcement

System Overview



COMMERCIAL
VEHICLE
PARKING
←

PROCEED TO
LANE
ON GREEN





4



5



6

7



8







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Fast Timer	Comm Timer	Lane Type	Fast Lane Selector	Comm Lane Selector	Stag. Lane Selector	Front-NE	Front-F	Back-NE	Back-F	Apoc. Comm Trucks	Fast In-A-Row	Park Queue	Entry Timer	Delay Timer
255	255	F	1	1	1					0	3	0	0	100
270	270	C	1	1	1					0	3	0	0	100
280	280	C	1	1	1					0	3	0	0	100
295	295	C	1	1	1					0	3	0	0	100
295	295	C	1	1	1					0	3	0	0	100
295	295	C	1	1	1					0	3	0	0	100
310	310	C	1	1	1					0	3	0	0	100
315	315	C	1	1	1					0	3	0	0	100
320	276	C	1	1	1					0	3	0	224	100
L1 325	325	C	1	1	1					0	3	0	0	100
L2 325	325	C	1	1	1					0	3	0	0	100
L3 330	330	C	1	1	1					0	3	0	0	100

Border Entry

T Seg: Edited

IOs Memory

FAST

COMM

255

Parking

Booths

Ext. Timer

Real Loops

L1 Opk: 00 L2 Opk: 250 L3 Opk: 00

Lan 1 Lan 2 Lan 3

Back

Main Menu

RUN

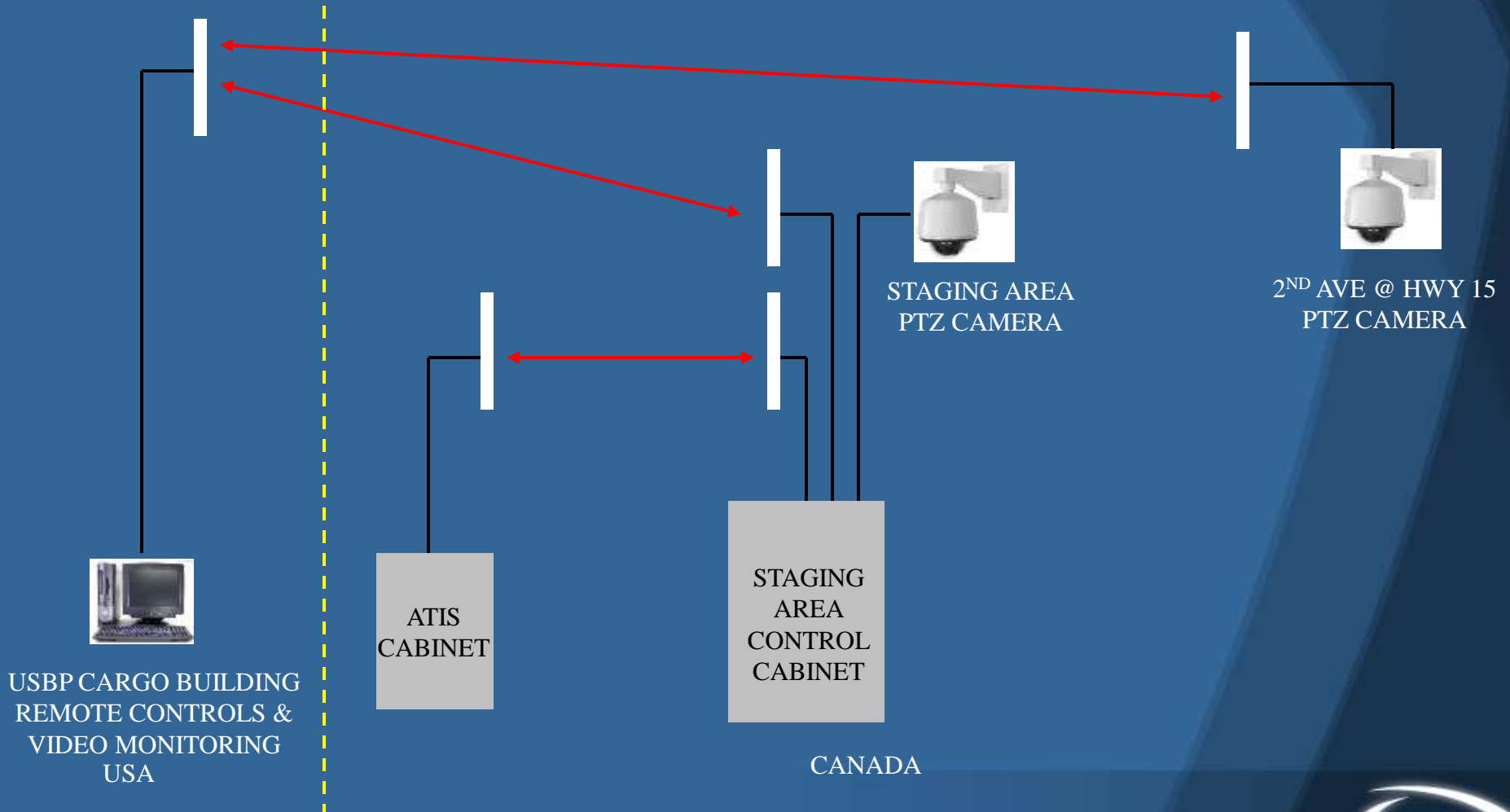
Remote Lane Control System for US Customs & Border Protection (USBP)

- Remote Control at US Customs & Border Protection Entry Lanes
- Remote Control at US Customer & Border Protection “FAST” Lanes
- Future control for other lanes or functions

US Border Entry Lanes			
Lane 1	Lane 1 Closed	Closed	Open
Lane 2	Lane 2 Open	Closed	Open
Lane 3	Lane 3 Open	Closed	Open

“FAST” Lane Control			
LANE 11 CONTROL	L11 = FAST LANE	COMMERCIAL	FAST
FAST ENTRY CONTROL	FAST LANE = GRN	RED	GREEN
Spare Relay	Relay OFF	ON	OFF
Spare Relay	Relay OFF	ON	OFF

Video Communications and ATIS Integration



Video Monitoring System

- Pan, Tilt, Zoom (PTZ) Video Monitoring Cameras System
- Violations monitoring
- Incident Management monitoring



PLC Control Logic

- Dynamic vs. Static
- Comprehensive testing and debugging performed prior to installation



Vehicle Detection System



Video Detection



Microwave Detection



Inductive Loop Detection



Lessons Learned

- Critical that equipment be thoroughly evaluated and tested in advance



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- Stakeholder input critical to project success
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- Enforcement key to changing driver behavior



MINOTON

Roads West

CERENT
DISTRIBUTORS
INC.





10

X

11

X

FAST

McKinney

Independent System Evaluation

- Western Washington University – Study (www.wwu.edu/bpri/vehicles)
- Overall reduction in wait times for all commercial trucks
- Further reduction in wait times for new “FAST” lane access





Questions?