



AAPA & *naWe*
Marine Terminal Management
Training Program

Information Technology and
Terminal Operations



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Steve Bushey

- Over 35 years (1973) experience in transportation information systems management
 - Ocean Carriers
 - Ports / Terminals
- President of Global Transportation Solutions, LLC, a Maersk – Eurogate company, for TOPS terminal operations system global sales and implementation.
- Founder of Americas Systems, Inc., a custom software development company specializing in ocean transportation applications, in 1989. Sold to Maersk Data - 2002
- Sea-Land Service, Inc.

Strategic Systems Planning

Executive Information Systems

Systems Implementation

IT Operations / Data Center

Global Application Development

Decision Support Systems

Training

Help Desk Support

Introduction

- Technology is an essential part of managing and running a container port / terminal.
- A wide variety of options are available to terminal management and IT management:
 - Technologies
 - Products
 - Vendors
- What's best for your terminal?

Question: What is the role of Information Technology Role in today's modern container terminal?

➤ Manage the Business

- Administrative Systems (email, word processing, spreadsheets, presentation tools, PowerPoint, etc.)
- Financial Systems & Human Resource Systems
- Sales / Marketing Systems
- Security / Access Control / TWIC

➤ Run the Operations

- Inside the Terminal
- Outside the Terminal

Manage the Business Financial and Human Resource Systems

- Enterprise Resources Planning Systems (ERP)
 - Holistic Approaches replaces individual systems
 - Fully Integrated
- Leading Vendors serving Marine Terminal Market

Vendor	Product	Country
SAP	MySAP	Germany
Oracle	e-business	US
Sage	MAS 90	UK
Microsoft	Protheus	US
SSA	SSA ERP	US



Sales / Marketing Systems

- PIERS (a Journal of Commerce company)
 - Collect Import / Export data available through the Freedom of Information Act.
 - US and Global Import / Export Data
 - [Trade](#) Profiles Demo
- Lloyds List (Maritime and Transport News Portal)
 - Maritime Financial Information
 - Vessel capacity and new builds
- ComPair Data (American Shipper Magazine Group)
 - Vessel Schedules
 - Port Rotations
 - Analytics
 - [Demo](#)

Security / Access Control / TWIC

- A Transportation Worker Identification Credential (TWIC™) is a biometric credential that ensures only vetted workers are eligible to enter a secure area of a Maritime Transportation Security Act-regulated port or vessel unescorted.
- Cards first (being issued now), Readers and Applications second
- TWIC provides a tamper-resistant biometric credential
- An individual must provide biographic and biometric information such as fingerprints and sit for a digital photo
- Three accepted ways to authenticate or prove identity to a system or an authorized person.
 - Something you have - like an ID card.
 - Something you know - such as a PIN number.
 - Something you are - a biometric, such as facial features, fingerprints, et.
- Will be integrated into terminal applications such as Gate access

Run the Business – Inside the Terminal

➤ Terminal Functions

- Gate Systems
- Terminal Operating Systems (TOS) - Yard & Vessel

➤ Terminal Technology (examples)

- OCR
- RFID
- DGPS

➤ Vendors (examples)

- CAMCO Technologies
- SAIC
- Hi-Tech Solutions

Terminal Automation - Areas of Concentration

➤ Gate / Pre Gate

- Pre advice / appointment systems
- Web portals / appointment systems
- Gate pedestal
- OCR
- Driver ID Card Readers
- Fully integrated systems – GEM

➤ Yard

- Automated terminal equipment
- Equipment monitoring (reefer temperature, CHE fuel levels, tire pressure, etc.)
- Container Optimization (Allocation filters, Simulation tools, etc.)

➤ Vessel

- Limited, primarily crane stability and positioning tools
- Currently mainly EDI (stowage plans, load lists, discharge lists)

Gate Systems

- Many Gate System Vendors offering a variety of applications
- All use basically the same technologies
- The Vendors
 - TOS Vendors (NAVIS, TideWorks, RBS, COSMOS, etc.)
 - Specialist Vendors
 - ◆ Embarcadero Systems Corporation
 - ◆ TideWorks GateVision
 - Technology Vendors
 - ◆ OCR
 - ◆ Pedestals
 - ◆ Cameras
- Gate Entry Management (GEM)

smartGATE™



Gate Entry Management (GEM)



What does GEM do?

- Provides trucking companies with web interface tool to:
 - make time-slot bookings.
 - ensure data for exports and imports is "clean" before truck arrives at the terminal.
- Provides integration platform linking:
 - AM Radio
 - Portal OCR technology (SAIC)
 - Pedestal technology (LA King)
 - Terminal operating system (NAVIS or CERES)
 - Transponder technology (TransCore)



The Companies - Terminal Operating Systems (TOS)

- Carriers / Terminal Operating companies began developing for own use in the late 1970s
- First commercial product introduced 1988
- First versions nothing more than tools to record yard and vessel activities, provide reports and communicate activity.
- Later versions introduced planning and productivity modules
- Current versions offer efficiency tools for container stacking and yard planning / routing.
- Latest versions offer complex integration tools for gate
- Automation of cargo handling equipment
- Operations simulation

Standard TOS Architecture

Graphical
Container
Planning,
Monitoring and
Control System

- Operations Management and Control, Graphical Planning, Management, Automation, CHE Interface
- Main Vendors
 - NAVIS – SPARCS
 - TideWorks – Spinnaker
 - RBS - TOPX

Foundation
System

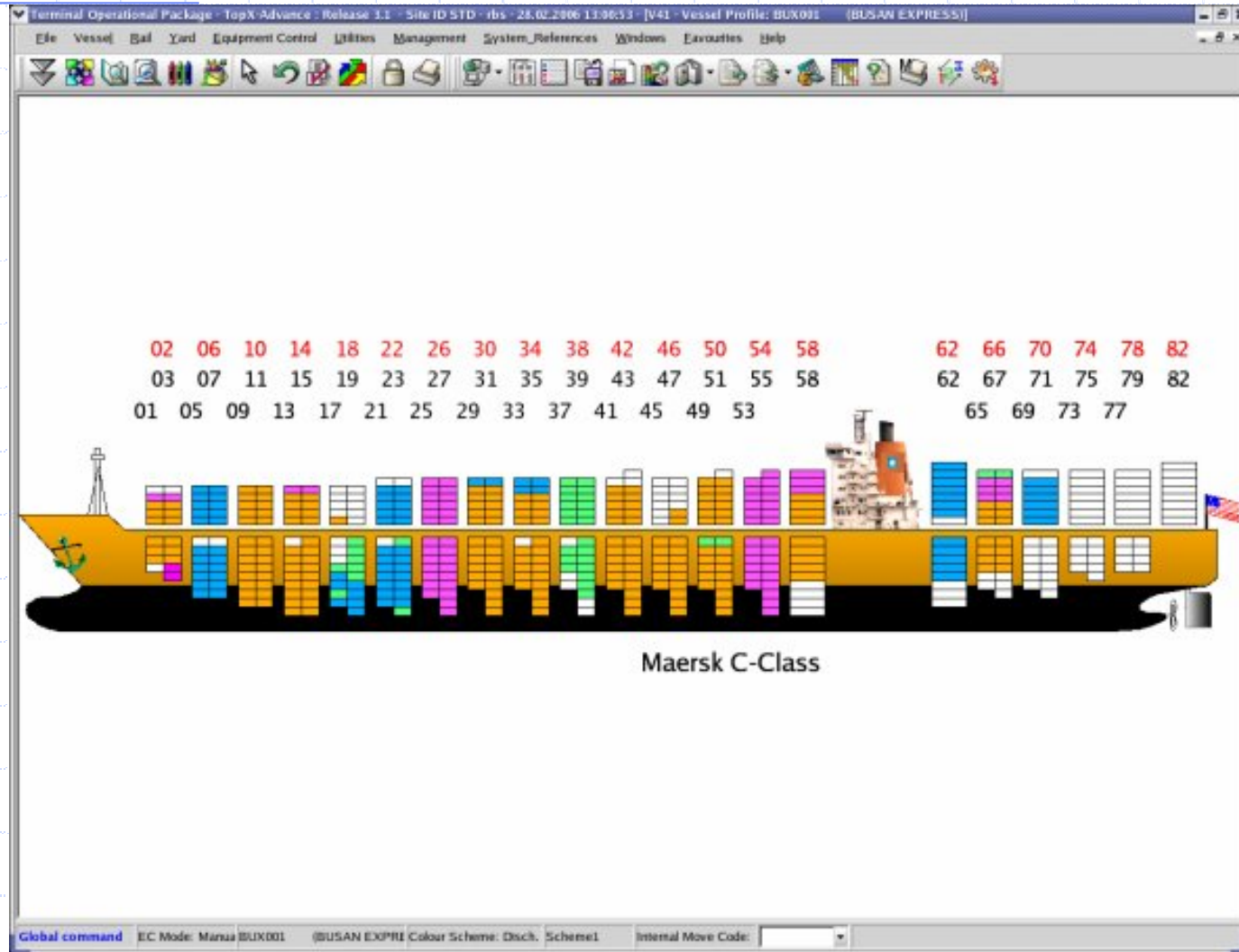
- Container Data Processing, Break-bulk Data Processing, Vessel Process, Truck Processing, Billing, EDI, Reference Data
- Leading Vendors
 - NAVIS – EXPRESS
 - TideWorks – MainSail
 - RBS - TOPO



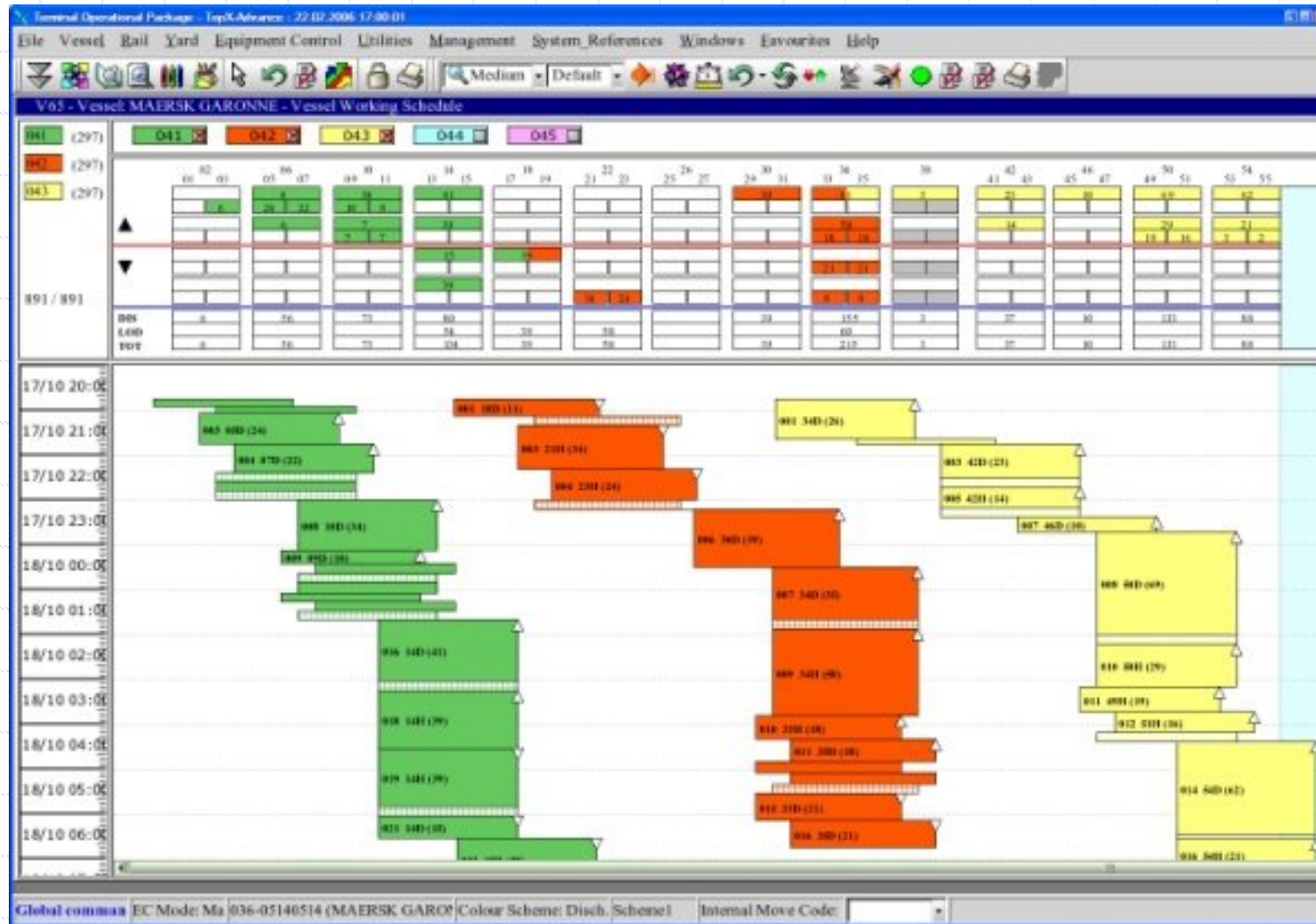
TOS Systems – Vendors

Vendor	Product	Comment
Advent Inc.	Terminal Management Systems (TMS)	Offer source code
COSMOS N.V.	Various Modules	Limited US Experience
CyberLogitec Co. Ltd.	OPUS	Subsidiary of Hanjin
Trans-I Technologies	TransTerminal	Relatively New Product
JADE	JadeMaster	New Zealand
NAVIS	Express & Sparcs	Market Leader
Portek	Container Terminal Management System	Missing some US Requirements
Realtime Business Solutions Pty.	TOPO & TOPX	Innovation Leader
TideWorks Technology	Mainsail & Spinnaker	Part of Carrix / SSA Terminals Company
Total Soft Bank Ltd.	CATOS	Experienced Vendor

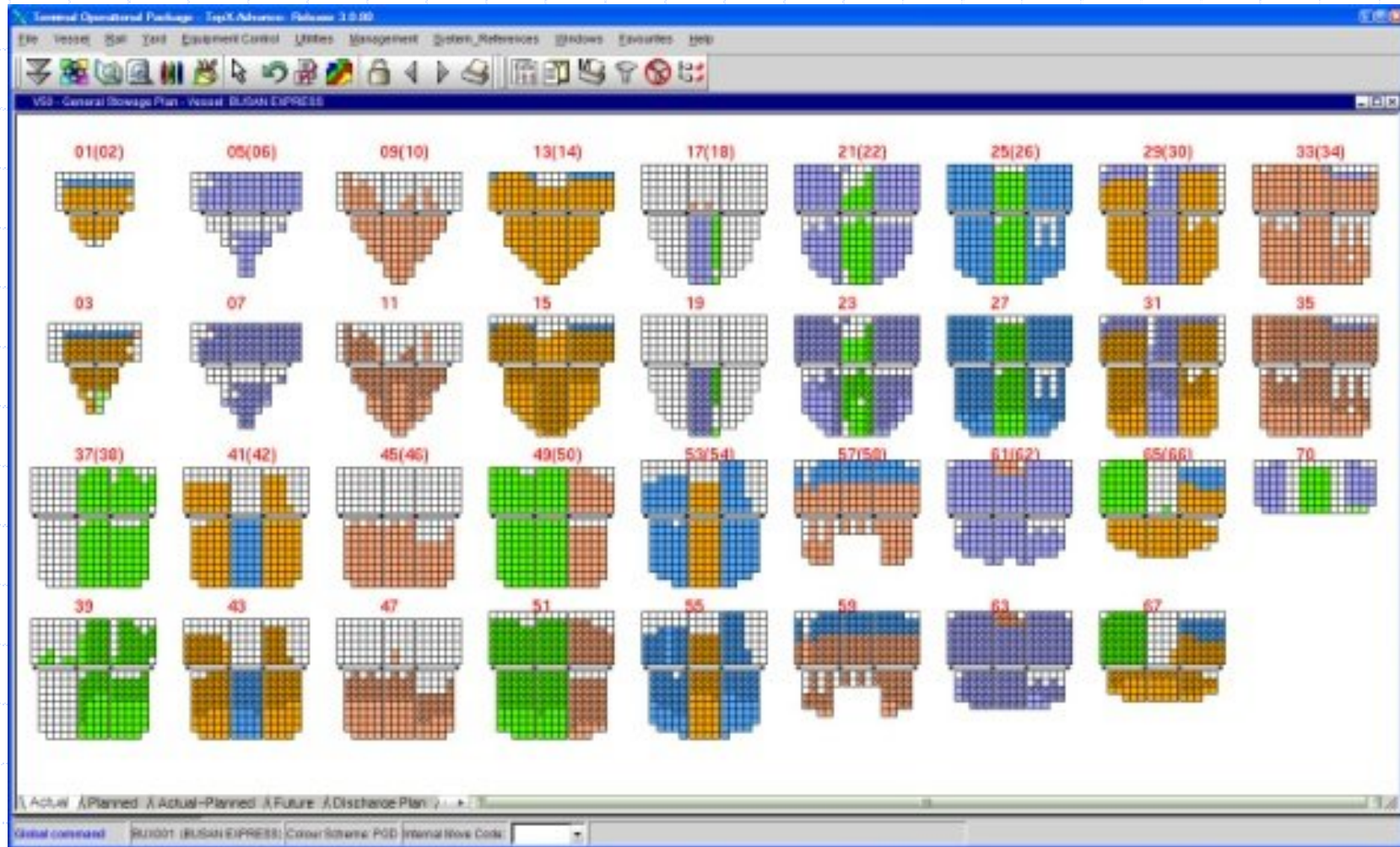
Vessel Management - Vessel Profile



Vessel Management - Crane Working Schedule




Vessel Management - Vessel Stowage View



Container Information




G20 - Container Information
⌵ ⌵



CLHU8246888

40

9.6

Current Loc.	ISO	45G0	ArrCar	STUFF
Y 1A 17 C 1	GrWt	4.0	DepCar	VESP001
Planned Loc.	Tare	4.0	Org	
	Cat		LP	AUSYD
	Commod		DP	LKCMB
	LOP	ACL	FDP	LKCMB
Historical Loc.	Seal No		Temp	22.0C
	Spec Hdl Cd		Grade	
	Avail Time		Load Instr.	
	Arrival Time	2005/09/13 16:36:49		
	Est. Mv Time			
	Est. Mv Time 2			

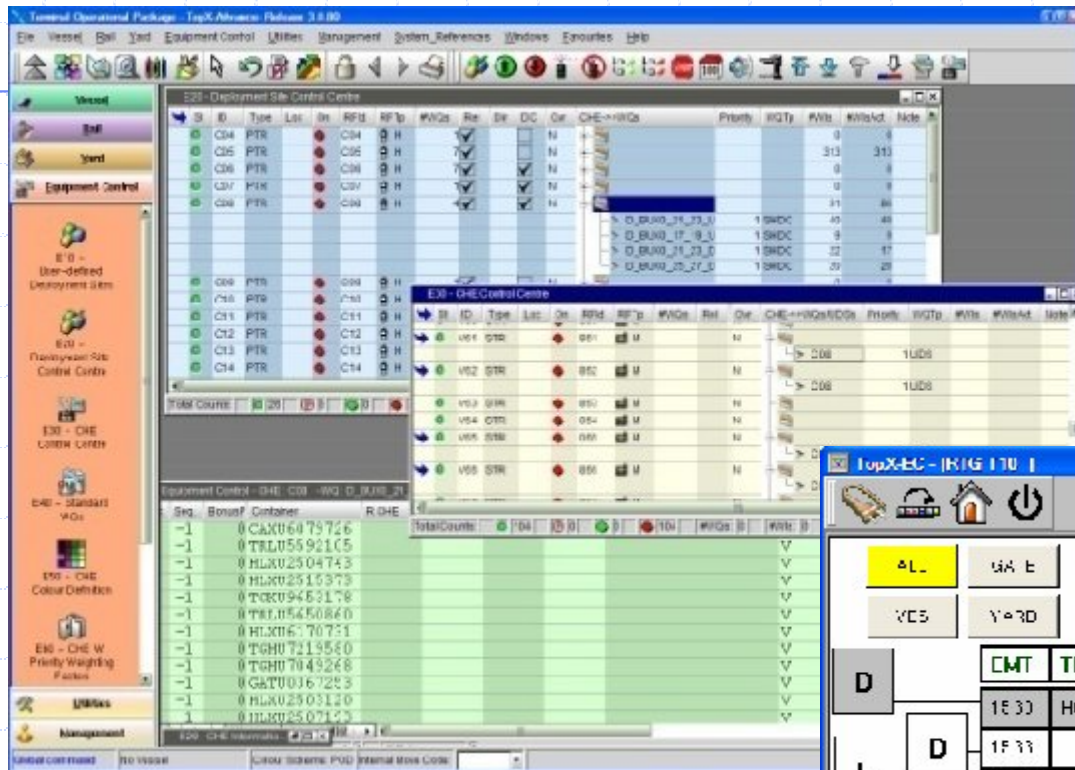
Rail Management

Container	ISO	HGM	IZP	IIP	DevCar
1 FESL00001E30	22G1	8.5	WAN	LEOAK	DEPTRN000002
2 FESL00001E36	22V1	8.5	WAN	LEOAK	DEPTRN000002
3 FESL00001E30	22G1	8.5	VSK	LEOAK	DEPTRN000002
4 FESL00001E4C	22R1	8.5	VSK	LEOAK	DEPTRN000002
5 FESL00001E2C	22R1	8.5	WAN	LEOAK	DEPTRN000002
6 FESL00001E36	22R1	8.5	WAN	LEOAK	DEPTRN000002
7 FESL00001E2C	22G1	8.5	VSK	LEOAK	DEPTRN000002
8 FESL00001E4C	22V1	8.5	VSK	LEOAK	DEPTRN000002
9 FESL00001E36	22G1	8.5	WAN	LEOAK	DEPTRN000002
10 FESL00001E04	22V1	9.5	WAN	LEOAK	DEPTRN000002
11 FESL00001E14	22G1	9.5	VSK	LEOAK	DEPTRN000002
12 FESL00001E20	22R1	8.5	VSK	LEOAK	DEPTRN000002
13 FESL00001E40	22G1	8.5	WAN	LEOAK	DEPTRN000002
14 FESL00001E40	22R1	8.5	WAN	LEOAK	DEPTRN000002

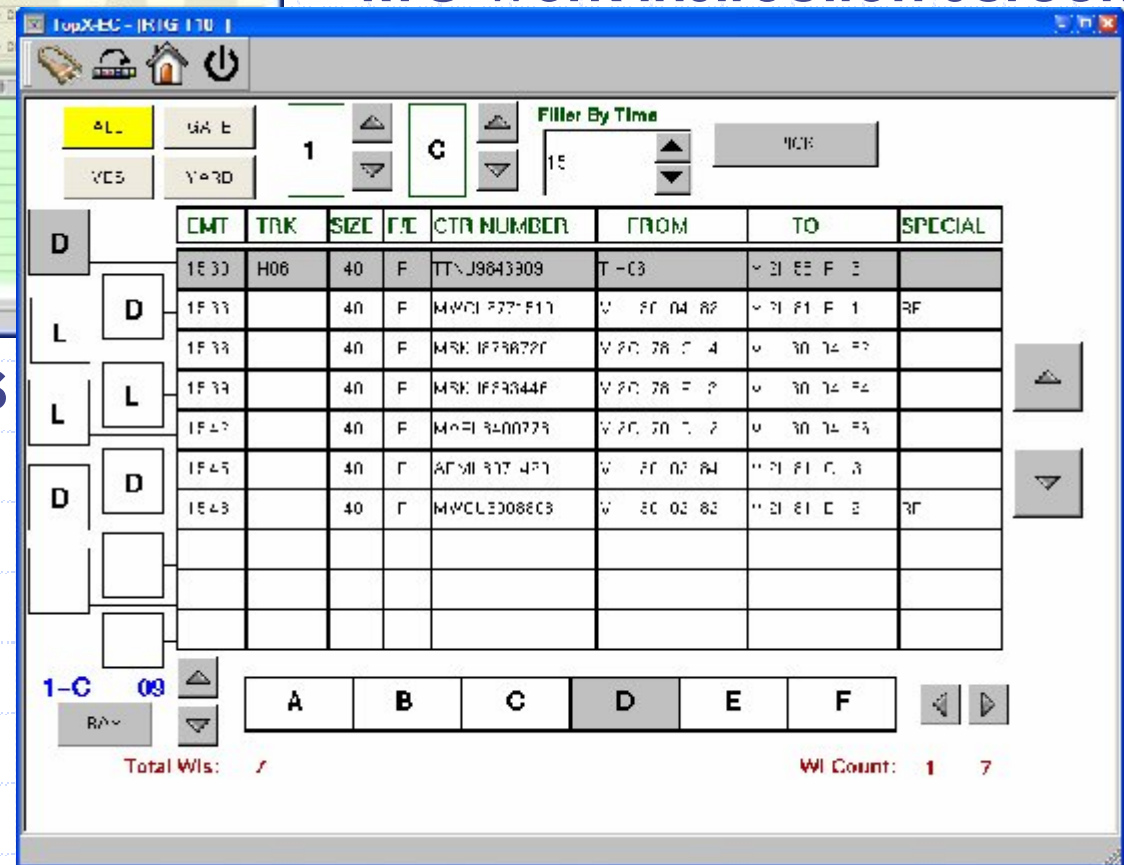
Train layout view

Train list view

Equipment Control

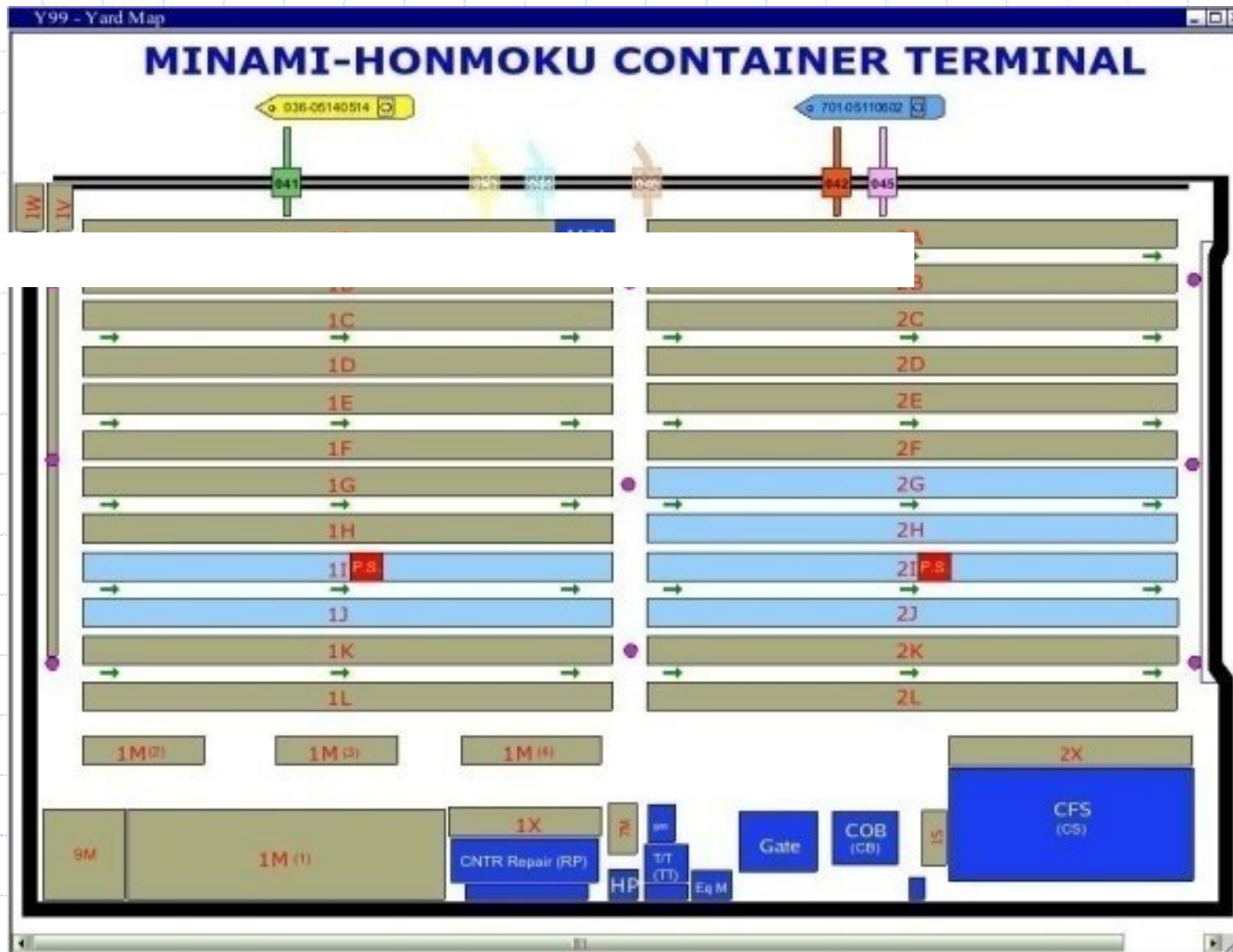


RTG work instruction screen



Equipment control panels

Yard Layout View



Container Information List

Terminal Operational Package - TopX Advance Release 1.0.62 - [M30 - Storage Report]

File Vessel Bal Yard Equipment Control Utilities Management System References Windows Favorites Help

Days	Ctr No	ISO	GrWt	DP	Current Loc.	Plan 1 Loc.
1	181	CAZD9605172	15.9	USORF	Y A07 338 15 2	
2	181	OSTO5510138	20.0	USORF	Y A07 342 03 2	
3	181	ACLDG172137	23.0	DESKV	Y A07 344 01 2	
4	181	GCN04610139	24.3	CANAL	Y A07 344 13 2	
5	181	ACLD9619274	23.8	CANAL	Y A07 348 11 1	
6	181	KRP01511261	22.6	USROU	Y A06 276 11 1	
7	181	KRP07044013	21.3	DESKV	Y A06 299 12 1	
8	181	KRP01489120	19.6	USROU	Y A06 303 07 1	
9	181	KRP07118288	20.0	USROU	Y A07 324 05 2	
10	181	KRP07256522	8.5	USROU	Y A07 325 09 1	
11	181	TTN05278893	25.3	DESKV	Y A08 362 11 3	Y B07 358 07 1
12	181	TRIG5584093	24.0	USROU	Y A08 362 13 1	Y B07 358 11 2
13	181	TRX07263788	14.2	USCES	Y A08 363 03 1	Y B07 356 03 2
14	181	TGR08253785	18.0	USCES	Y A08 363 15 1	Y B07 358 15 2
15	181	IVL08255678	18.0	USCES	Y A08 363 15 2	Y B07 358 15 1
16	181	PONO1605313	26.6	DESKV	Y A08 362 13 2	Y B07 358 07 3
17	181	PONO1545232	8.9	USROU	Y A08 364 09 1	Y B07 356 15 2
18	181	TCN08150352	18.9	USCES	Y A08 376 09 1	Y B07 358 01 1
19	181	PONO7348371	18.9	USCES	Y A08 376 17 2	Y B07 358 15 3
20	181	PONO1615255	20.5	USCES	Y A08 381 08 2	Y B07 357 02 2
21	181	ACLD2177475	22.9	DESKV	Y A07 336 17 1	
22	181	INR08832249	23.9	CANAL	Y A09 397 09 2	
23	181	GCN04603242	19.0	USORF	Y A09 402 15 1	
24	181	ACLD2154616	22.7	DESKV	Y A09 405 09 2	
25	181	GCN01139218	7.0	CANAL	Y A09 407 03 1	
26	181	KRP07317319	18.0	USROU	Y A07 349 05 1	
27	181	KRP01443233	23.6	DESKV	Y A08 361 09 2	Y B07 356 05 3
28	181	KRP07434843	6.8	USMDY	Y B07 358 03 1	
29	181	KRP07302973	22.7	USROU	Y B07 358 09 2	
30	181	KRP07200021	6.1	USMDY	Y B07 360 01 1	
31	181	SC05602152	13.0	USCES	Y D03 151 03 1	
32	181	TRX07061293	22.9	DESKV	Y A08 364 07 1	Y B07 356 13 1
33	181	TGR08062747	11.7	USROU	Y A08 365 07 1	Y B07 356 09 3
34	181	PAC06146795	14.0	USCES	Y A08 365 11 2	Y B07 358 05 3
35	181	CPS06038866	12.0	USROU	Y A08 366 01 1	Y D03 151 05 1
36	181	PONO7341183	12.9	USCES	Y A08 385 09 1	Y B07 358 05 2
37	181	PONO7355258	13.1	USCES	Y A08 385 09 2	Y B07 358 05 1
38	181	TRIG747174	5.5	USCES	Y B06 337 01 1	
39	181	PONO1282901	25.0	USCES	Y B08 430 05 1	

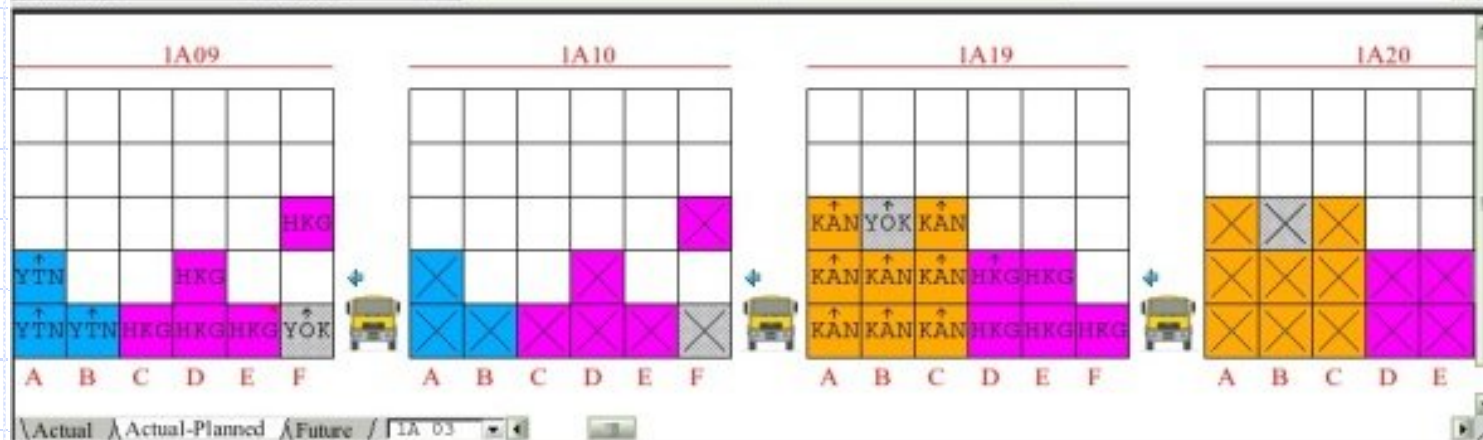
Plan Rail Load No Vessel Colour Scheme: Status Internal Move Code:

Container Bay and List View

V95 - Remaining Load List - Vessel : MAERSK GARONNE, All Ports, Total(476)

	Rehdl	Ctr No	DepCar	ArrCar	Current Loc.	Plan 1 Loc.
1		APMU4503465	036-05140514	036-05140514	V 34 06 88	
2		APMU4532186	036-05140514	036-05140514	V 34 08 90	Y RES
3		APMU4534764	036-05140514	036-05140514	V 34 06 90	Y 1H 01 A 1
4		APMU4544633	036-05140514	036-05140514	V 34 10 88	Y 1H 01 A 2
5		CMBU4085409	036-05140514	036-05140514	V 50 05 12	
6		FSCU6504456	036-05140514	036-05140514	V 38 08 90	
7		GLDU0707020	036-05140514	036-05140514	V 38 10 90	
8		KNLU4298018	036-05140514	036-05140514	V 06 01 88	
9		MABU4518192	036-05140514	036-05140514	V 34 08 86	
10		MABU6001887	036-05140514	036-05140514	V 06 01 82	
11		MSKU2345584	036-05140514	036-05140514	V 03 07 86	
12		MSKU4505850	036-05140514	036-05140514	V 34 08 88	
13		MSKU4575842	036-05140514	036-05140514	V 34 08 84	
14		MSKU4584084	036-05140514	036-05140514	V 34 06 86	
15		MSKU6427567	036-05140514	036-05140514	V 06 01 84	
16		MSKU8190221	036-05140514	036-05140514	V 38 06 90	
17		MSKU8230920	036-05140514	036-05140514	V 10 10 86	
18		MSKU8591878	036-05140514	036-05140514	V 46 10 86	
19		MSKU8907919	036-05140514	036-05140514	V 46 08 90	Y RES
20		MSKU9140755	036-05140514	036-05140514	V 46 10 88	
21		MWCU6547032	036-05140514	036-05140514	V 50 05 08	

Actual / Total

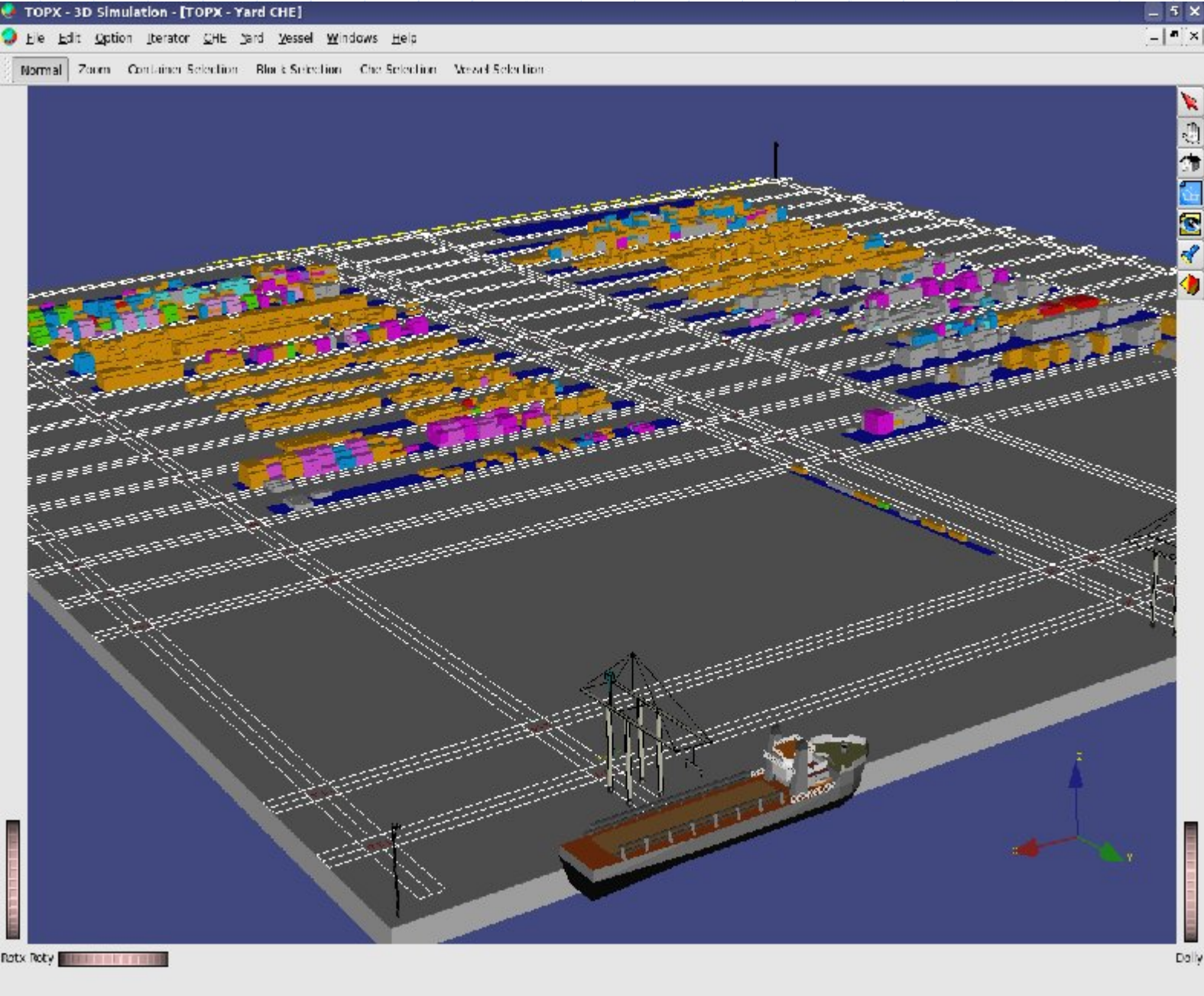
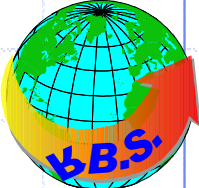


Yard Allocation Filter

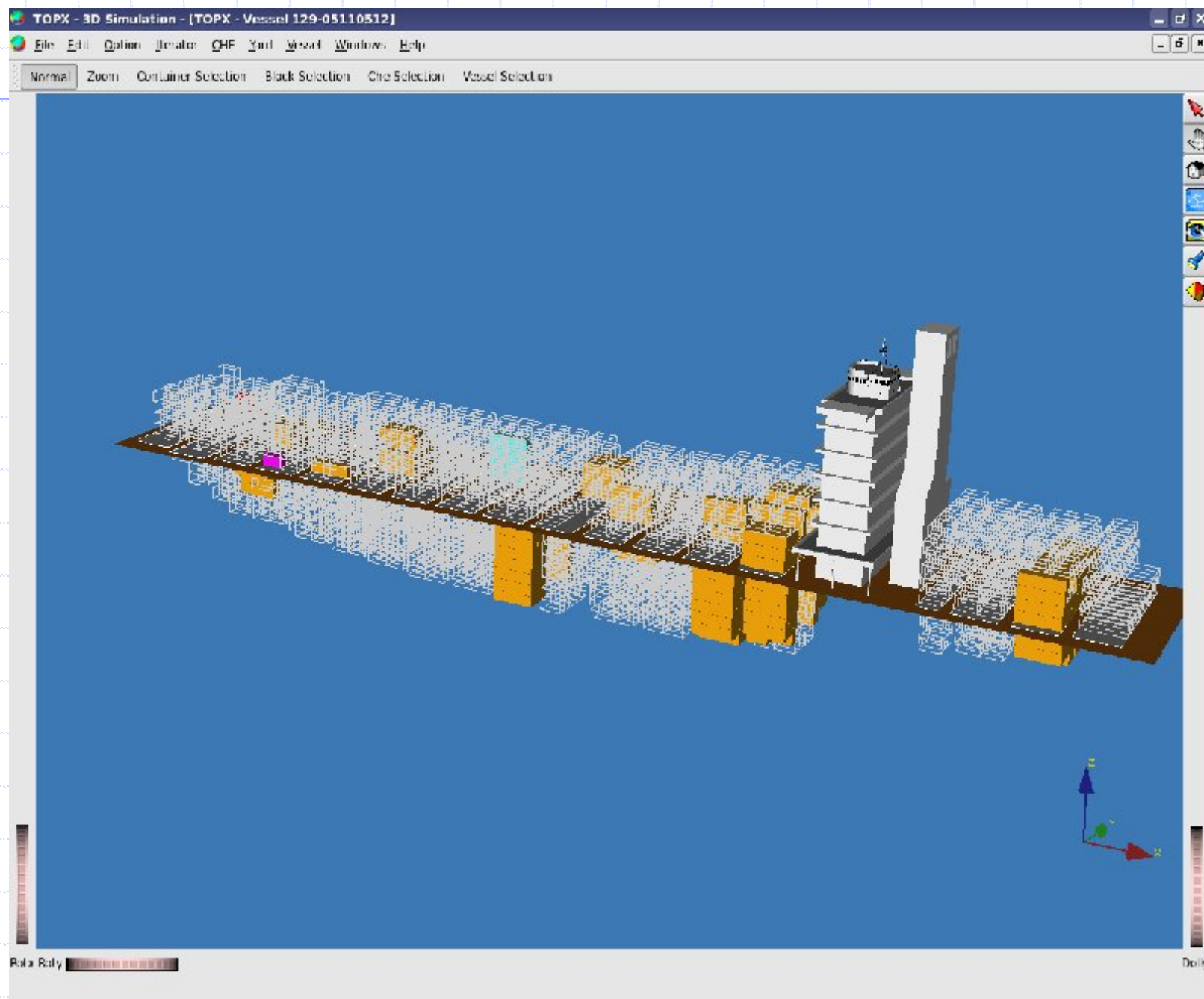
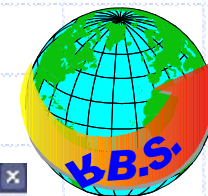
The screenshot shows the 'Yard Allocation Filter Editor - Copy of MAIN' window. The left pane lists filter items, with 'BOT,INS,40DRY' selected. The main panel shows the configuration for this filter, including fields for Filter Name, ActFlg, FlowCtrl, ISO, Length, Height, Type, AirGr, AirCar, DepGr, DepCar, Slat, Code Qual, Service Cd, SubSrv, Country, LP, DP, FDP, LOP, Consortium, CrNoFr, CrNoTo, Terminal ID, Comnod, Lead Instr, Pl, Od, Hr, Seal, CustChf, Dm, Sp, At, PO, Cat, Consignee, Swap BLFQ, Grade, Servicabl, Restrict, Repair St, Menu Det, Mac PL, Src, Dest, Dis, Rev, Wt Class, XY Dir, StackOrd, OnTopPtn, MacDist, WtCheck, Mixed, RTG - X Not By, STR - Y Not By, RTG - Y Not By, WLimit, OnTopOfEarlier, and Remark. A table at the bottom shows yard allocation data with columns for Bk, X1, X2, Y1, Y2, Z, Rev, and Exc. The table contains two rows of data for Bk 1 and 2.

Bk	X1	X2	Y1	Y2	Z	Rev	Exc	Mach
1	2J	77	76	A	F	1	1	
2	2J	85	86	C	C	1	1	

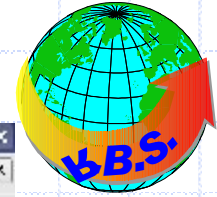
Next Generation



Next Generation



Next Generation



TOPX - 3D Simulation - [TOPX - Vessel Bayinfo]

File Edit Options Iterator QHE Yard Vessel Windows Help

Normal Zoom Container Selection **Block Selection** Che Selection Vessel Selection Move Selection

Choose Vessel:
700-05170517

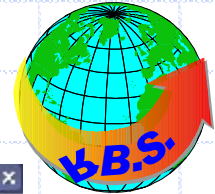
Choose Bay:
01 02 03
05 06 07
09 10 11
13 14 15
17 18 19
21 22 23
25 26 27
29 30 31
33 34 35
38
41 42 43
45 46 47
49 50 51
53 54 55
59
61 62 63
65 66 67
70

Hotx Hoty

Actual / **Planned** / Actual-Planned / Future

Dolly

Next Generation



TOPX - 3D Simulation

File Edit Option Iterator CHE Yard Vessel Windows Help

Normal Zoom Container Selection Block Selection Che Selection Vessel Selection

TOPX - Yard CHE

TOPX - Vessel 448-05180518

SEA-LAND COMBT

Rotex Plot Dolly

TOPX - Vessel Bayinfo

Choose Vessel:
730-051/0517

Choose Bay:
01-02-03
05-06-07
09-10-11
13-14-15
17-18-19
21-22-23
25-26-27
29-30-31
33-34-35
38
41-42-43
45-46-47
49-50-51
53-54-55
59
61-62-63
65-66-67
70

14 13 10 01 02 03 04 05 06 07 08 11 13

97
90
88
85
84
83
82
14
12
10
08
06
04
02

1417100 070911

Rotex Plot Dolly

Actual Planned Actual-Planned Future

TOS COMPLIMENTARY TECHNOLOGIES

Satellite Telemetry (Aust) Pty Ltd (Sattel)

➤ CTAS system and complementary products provide integrated solutions for managing and optimizing the performance of the container handlers and utility vehicles:

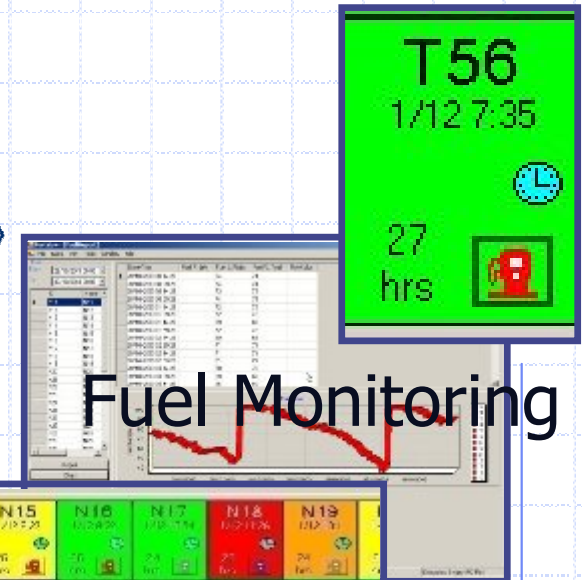
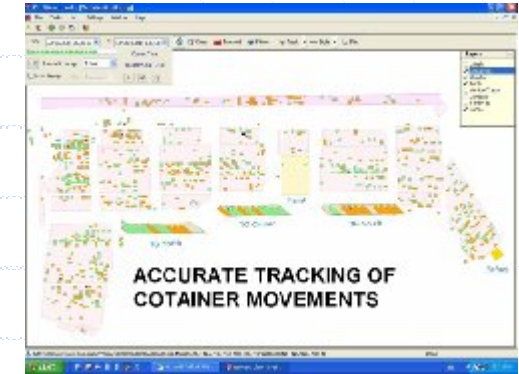
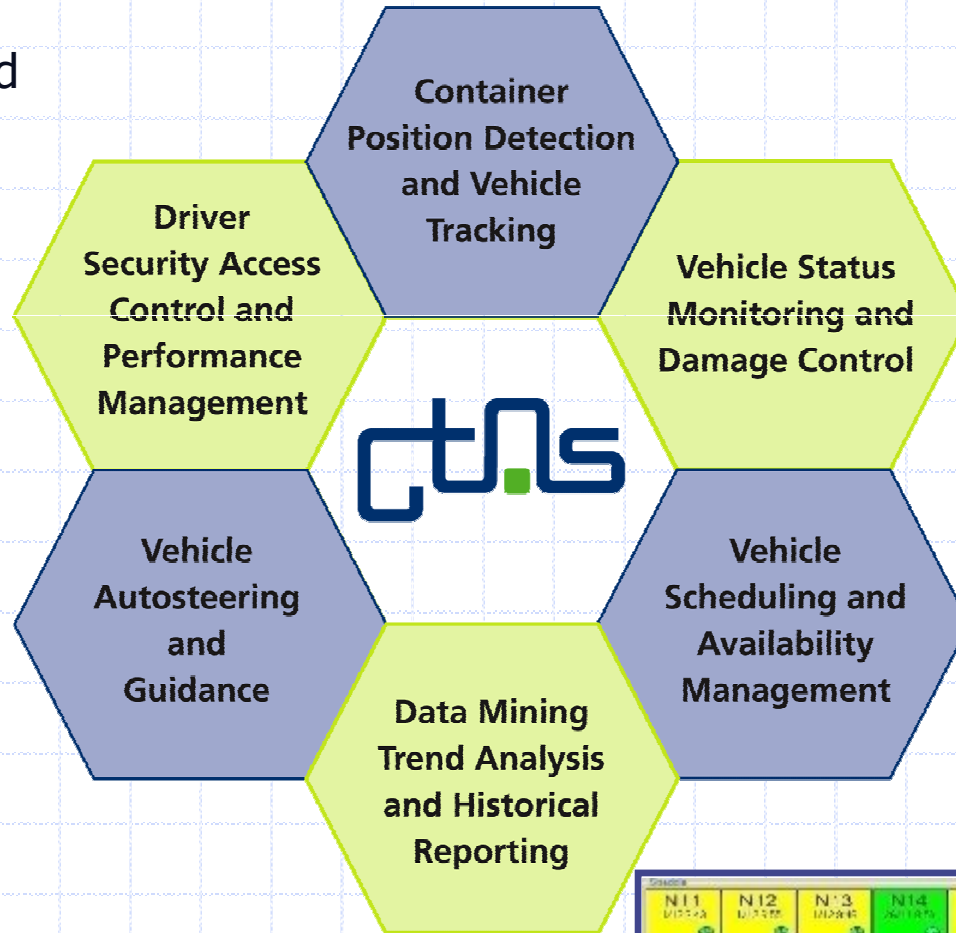
- Container Position Detection
- Vehicle Location Tracking
- Driver Identification and Vehicle Security
- Personnel Vehicle Access Security
- Shock Monitoring and Damage Control
- Fuel Monitoring and Refuel Management
- PLC data telematics
- Automated Entry and Exit Gates
- Container Yard Traffic Management
- Rubber Tyred Gantry Auto Steering
- Tyre Pressure Monitoring
- Truck Fleet Dispatch and Optimization
- Quay Crane Spreader alignment
- Vehicle Availability Scheduling

Satellite Telemetry (Aust) Pty Ltd (Sattel)

CONTAINER TERMINAL AUTOMATION SYSTEM

Container Position Detection

Shock Monitoring and Damage Control



Fuel Monitoring

The Technologies - RFID

- Radio Frequency Identification
- Technology based on radio waves.
- A reader communicates with a tag, which holds digital information in a microchip.
- The tag picks up signals from and sends signals to a reader.
- Tags have a unique serial number, come in many forms and can contain other information such as shipper, commodity, etc.
- US Department of Defense and significant importers
- Security (e-seals) and Logistics applications are driving this technology in the Transportation Industry.

The Technologies

RFID – some examples

➤ EZ Pass.....



➤ Generic tags

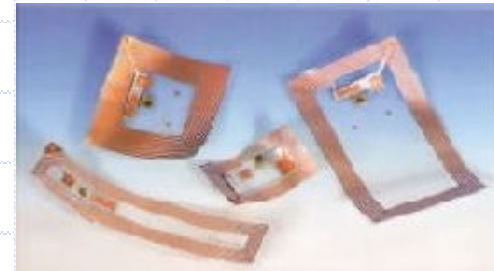


i-D Tag



i-Q Tag

➤ "Smart" tags (have read and write capability)



➤ Driver ID cards and readers

- SEA LINK ®
- Transportation Worker Identification Credential (TWIC) card
- Other driver ID cards

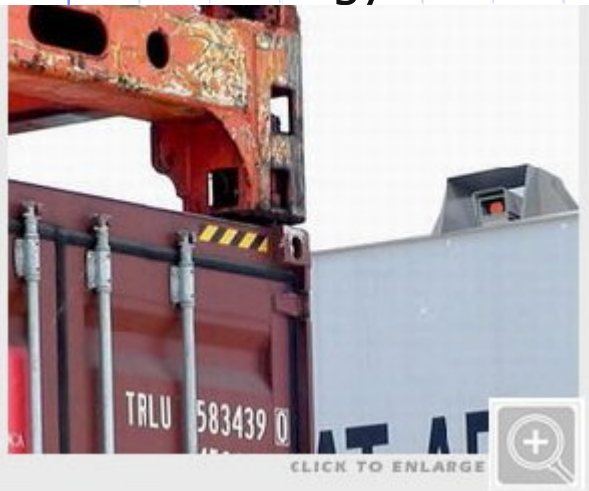


The Technologies - OCR

- Optical Character Recognition (OCR)
 - The process where a scanner reads printed characters
 - The software interprets the number and passes to a computer application
- An OCR system can generally be thought of as 3 general modules
 - Image-capturing units (reader / scanner)
 - A software recognition engine and application program
 - System infrastructure (mounting and support structure and communications network)
- Common OCR Applications include:
 - Gate OCR (portal and pedestal gates)
 - Crane-mounted OCR systems (Quay crane and Cargo Handling Equipment)
 - Rail Operations (Rail Portals)
 - Yard Operations (Moving Inventory Vehicles, utilizing integrated OCR and GPS systems)

The Technologies OCR (cont)

- ▶ Many vendors
- ▶ Technology becoming common place around the world



Crane OCR



Gate OCR



Rail
OCR

The Technologies OCR (cont)

- APS Technology Group www.aps-technology.com
- APS Technology Group is the leading provider of Optical Character Recognition (OCR) systems and automation technology solutions for marine container terminals and intermodal operations
- San Diego, CA
- Other Vendors
 - SAIC
 - Hi-Tech Solutions
 - Camco Technology



The Technologies - WLAN

- Wireless Local Area Network
- Wireless hand held computers with built in scanners for RFID tags or bar code readers



- Wireless belt printers

➤ **Wireless Bluetooth® or 802.11b**

Our WLAN solution incorporates a user installable Cisco PC card or factory installed Symbol Spectrum 2APC card (PDMCIA), which connects the microFlash 4i printer to a wireless network in ad hoc peer-to-peer mode or in infrastructure mode and complies with the IEEE 802.11b interoperability standards for direct sequence wireless LANs. When the printer is configured with the integrated Bluetooth module, users can realize all of the convenience, power efficiency and cost benefits of the WPAN.

➤ **Magnetic Stripe Card Reader**

The optional insertion magnetic stripe card reader provides route professionals the advantage of collecting payments and generating receipts while at the customer site. The insertion-style card reader provides outstanding reliability and is known for its ease-of-use.



- Wireless vehicle mount terminals, some with voice recognition technology



The Technologies - GPS / DGPS

- GPS - Global Positioning System
 - Satellite based navigation system
 - 24 geosynchronous satellites
 - has become a universal, reliable positioning system
- DGPS - Differential Global Positioning System
 - More precise than GPS
 - Allows yard applications to utilize GPS for determining specific (yard) locations
- Applications include:
 - On Star
 - Container yard location
 - Yard equipment location (straddles, RTGs, RMGs, hostlers, etc.)
 - Truck / Cab location
- Vendors
 - Savcor, www.savcor.com Finland, 1100 employees
 - SAIC



HHLA – Container Terminal Altenwerder, Germany, CTA

- Hamburg Port Consulting IT Group
- Production since 2003
- Terminal Automation
- Crane “drivers” in Kitchen
- Terminal Operating System - TERMINALSTAR
- Cargo Handling Automation / Advancements
- Laser / Cameras
- [Movie](#)

Run The Business – Outside the terminal

- Off Dock Yards
- Chassis Pools
- Virtual Container Yards (VCYs)
- Traffic Mitigation Fees / Extended Gate Hours
- Truck Appointment Systems

Off Dock Yards

- Primarily used for empty containers or chassis.
- Frees up storage space in terminals for loaded moves.
- Introduced a non-revenue “third leg” to trip patterns.
- Can create additional moves for imbalanced areas.
- Critical Success Factors:
 - Limit third leg distance.
 - Real-time integration with ocean carriers and marine terminals operating systems.
 - ◆ In-House Systems
 - ◆ Off the Shelf Systems
 - PC Based
 - Internet Based
 - www.etermsys.com

Chassis Pools



- Originally limited to only one terminal.
- Expanded by OCEMA / CCM to cover multiple marine, rail and intermodal terminals.
 - www.ccmpool.com
 - Six Regional Pools
 - Pool results have been very successful.
 - Increased equipment utilization.
 - Decreased chassis fleet size.
 - Freed storage space for other equipment
 - Lower costs – insurance, M&R, etc.
- Critical Success Factors:
 - Multi-facility pools versus individual terminal.
 - Strong IT systems to track:
 - ◆ IN / OUT activity,
 - ◆ M&R and
 - ◆ billing.



Virtual Container Yards (VCYs)

- AKA Street Turns or Street Interchanges
- Most current programs for international cargo are port sponsored (Oakland, LA/LBC, Virginia, NY/NJ).
- VCYs benefit multiple parties, but
- Slow to gain acceptance
 - Lack of consensus on costs / benefits.
 - Pricing / funding issues. No one wants to pay.
 - Ocean Carrier concerns on assignment of damage liability, free time, & compliance with contractual agreements.
 - Trucker concerns on revenue impact, damage liability, free time.
 - Ease of use.
- Critical Success Factors:
 - Low cost.
 - Shared cost / benefit.
 - Critical mass of truckers and equipment providers.
 - Ease of use.
- Container Fee legislation in CA and WA could provide needed impetus to this program.
- Commercial Systems driving this initiative

Virtual Container Yards (VCYs)

- There are 5 main vendors offering VCY systems in the U.S. today.
- All the systems are viable products.
- The main difference between the systems is the amount of automation of the data exchange.



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Filter Details
 Location De-Activate Filter Clear Search

Transactions

CU	TI	Trans. P.	LD	BESE	REQ.	CC/IE	COMM	Transaction	SZZ	MONITOR	GIS	REV	CONTRACT	STATUS	General Prop.	Lead	Inspector
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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SynchroNet Virtual Container Yard

SEARCH

Location: [] Type: [] Area: []

SYNCHRONET

Location	Trans. Type	Qty	Unit	Status	Created	Updated
Red Bluffs	400 20'	1	20' Dry Van	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 20'	2	20' Dry Van	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08
Red Bluffs	400 40' Flat	1	40' Flat	Post-Queue	10/20/08	10/20/08

Click Link to view the pending details.



VCY Search

Location: [] Type: [] Area: []

SEARCH

Results: 1-10 of 100

Location	Trans. Type	Qty	Unit	Status	Created	Updated
Red Bluffs	400 20'	1	20' Dry Van	Post-Queue	10/20/08	10/20/08

All Containers

Arrival()	Shelving	Container	Clear	Headline	Expected	Location
Details	AI	AWSU916097	EX	36	20	7/10/2008 PORTSMOUTH, VA - 801 DOUGLAS AVENUE
Details	AI	FJUC363616	EX	36	20	6/20/2008 PORTSMOUTH, VA - 801 DOUGLAS AVENUE
Details	AI	FJUC344493	EX	36	20	5/20/2008 PORTSMOUTH, VA - 801 DOUGLAS AVENUE
Details (Interchange)	AP	ARUC052273	EX	36	40	4/20/2008 CHESAPEAKE, VA - 815 INDUSTRIAL AVE
Details	CA	MDA0294829	EX	36	20	6/10/2008 CHESAPEAKE, VA - 815 INDUSTRIAL AVE
Details	CA	EDCU154481	EX	36	20	6/10/2008 CHESAPEAKE, VA - 815 INDUSTRIAL AVE
Details	CA	EDMU105485	EX	36	20	6/10/2008 CHESAPEAKE, VA - 815 INDUSTRIAL AVE
Details	HK	SLHC261912	EX	36	20	6/10/2008 CHESAPEAKE, VA - 815 INDUSTRIAL AVE
Details	MD	MSCU188507	EX	36	20	7/10/2008 PORTSMOUTH, VA - 801 DOUGLAS AVENUE
Details	MD	MSCU264459	EX	36	20	7/10/2008 CHESAPEAKE, VA - 815 INDUSTRIAL AVE
Details	MD	MSCU166856	EX	36	20	7/10/2008 PORTSMOUTH, VA - 801 DOUGLAS AVENUE
Details (Interchange)	AI	PORTU182895	EX	36	40	4/20/2008 PORTSMOUTH, VA - 801 DOUGLAS AVENUE

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REZ1

SPEDDITCH

Posted Loads

Location	Container	Trans. Type	Qty	Unit	Status	Created	Updated
Red Bluffs	Container 1	400 20'	1	20' Dry Van	Post-Queue	10/20/08	10/20/08

Empty

Program	Cont. Type	Date	Expected	Ship. Date	Expected
1	400 20'	10/20/08	10/20/08	10/20/08	10/20/08



Traffic Mitigation Fees / Extended Gate Hours

- PierPASS is a Traffic Mitigation Fee.
 - Was created to change behavior since its fees are applied only against daytime gate moves.
 - The fees assessed on daytime gate moves are used to pay for extended gate hours.
 - Other ports are looking at the model to raise money for infrastructure, not change behavior.
 - Generated a forum for other port-wide initiatives.
 - ◆ RFID Truck Tag Security Program
 - ◆ TWIC Testing
- Traditional Extended / Night Gates have been underutilized.
- Critical Success Factors:
 - Leadership and Stakeholder buy-in.
 - Strong IT system to handle accounting and re-bills
 - Neutral managing body for port-wide solutions.
 - Fees specifically designated to the solution.



Truck Appointment Systems

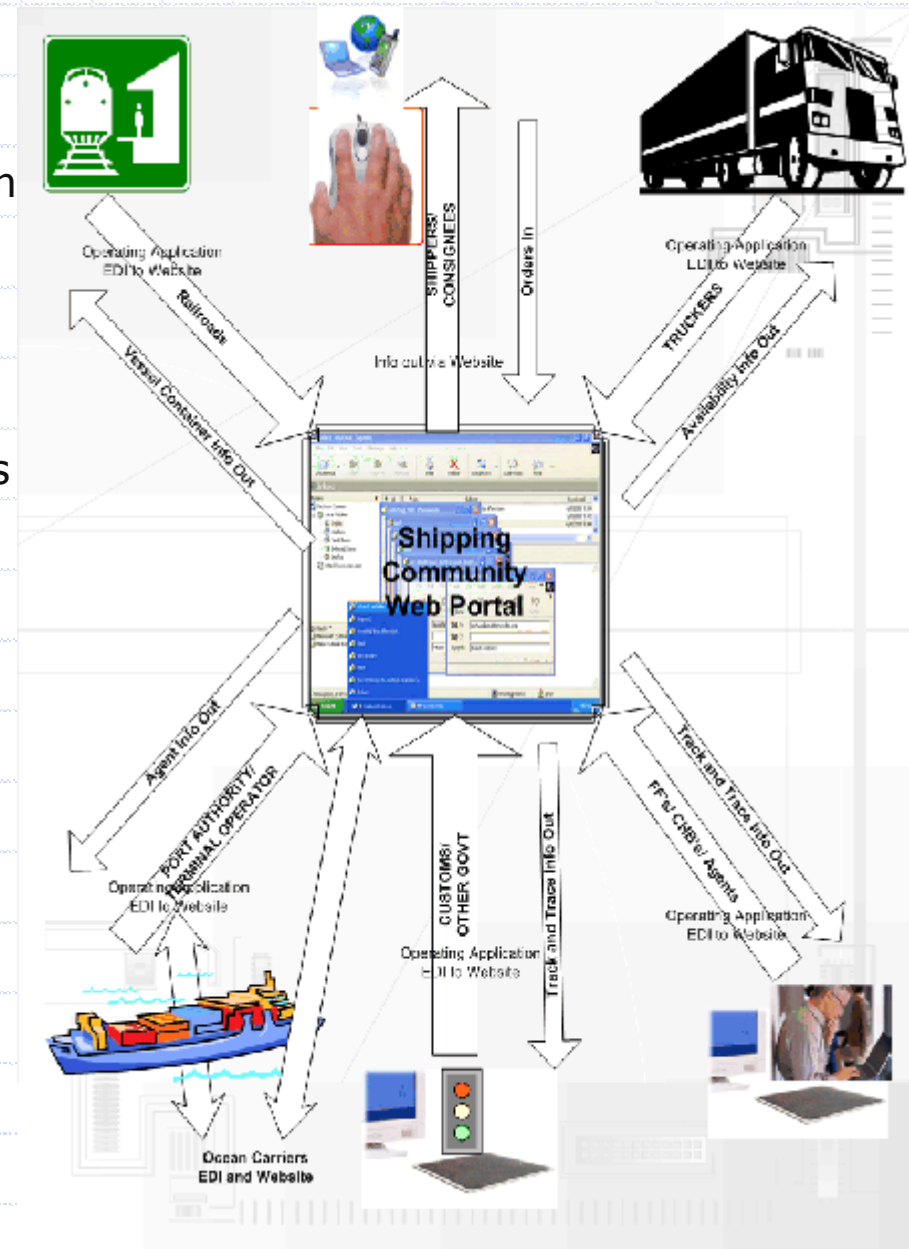
- Standard operating procedure in busy Asian ports.
- Seen as way to comply with environmental legislation to reduce truck engine idle time.
- Time windows vary from broad (a.m./p.m.) to specific (8:15, 8:30, 10:00, 11:00).
- Programs at Ports of Vancouver, Oakland, Los Angeles, Long Beach and Napoleon Yard at New Orleans.
- Primarily used for import pick-ups.
- Success has varied greatly.
- Critical Success Factors:
 - Requires priority both at the gate and in the yard.
 - Calls for good metrics.
 - Motor carriers prefer a single port-wide system over multiple systems.

The Technologies The INTERNET

- A world wide electronic network of computers with the ability to communicate with one another.
- Common Internet applications include:
 - Truckers viewing queues at terminal (web cameras)
 - Trucker appointments
 - Trucker delivery information
 - Cargo availability
 - Shipper inquiries

Port Community Systems

- A web portal designed to facilitate information flow between parties.
- Requires a powerful EDI engine to facilitate data exchanged between parties.
- Web based inquiry and update tools for truckers, freight forwarders, brokers, shippers and consignees.
- Managed by the port authority or third party.
- Critical Success Factors:
 - Up front Port Community commitment a MUST.
 - Requires participation by all major stakeholders.
 - Single web site for port wide initiatives (PierPass, Trucker Registration, etc.).
 - Not for profit but self funding.



What's best for your terminal?

- ▶ The Good News and The Bad News – You have OPTIONS

- Vendors
- Products
- Services
- Technologies

- ▶ Ask Yourself

- What Technology is appropriate for my terminal?
- What Vendor is appropriate for my terminal?
- Do we have an internal IT Staff? And what are their capabilities?

Look at Technology like any other business issue.

- One Size Does Not Fit All
- Vendors offer a wide variety of both stand-alone and integrated services.
- Many vendors offer competing products that yield the same solution (RFID, DGPS, OCR, Automated Gates, Security).
- The needs and priorities of one port community are not necessarily the same as another location.
- Involve all the stakeholder groups in the process of defining the business requirements, prioritize the needs, and perform cost benefit analysis *before* selecting solutions.

The Future?





AAPA & *naWe*
**Marine Terminal Management
Training Program**

Thank You



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